

THE SOUTHEASTERN DISTRICT MAINLAND  
SALMON FISHERY OF AREA M  
REPORT TO THE ALASKA BOARD OF FISHERIES

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By

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## ABSTRACT

The Southeastern District Mainland (SEDM) fishery of Area "M" is located on the south side of the Alaska Peninsula and occurs in Stepovak, Beaver, and Balboa Bays (Figures 1-2). Under a management plan originally established by the Alaska Board of Fisheries (BOF) in 1985, the fishery is currently allocated 6.0 percent of the total Chignik Management Area (CMA) bound sockeye harvest through July 25. The present plan to regulate the SEDM fishery is based on the Cape Igvak Salmon Management Plan, in the Kodiak Management Area (KMA), which the BOF instituted in 1978. After July 25, the SEDM area is managed on local salmon stocks. Over the past 20 years, about 90 percent of the sockeye harvest has been by set gillnet fishers and the remaining 10 percent by purse seine fishers. The recent ten year (1988-97) average harvest in the SEDM through July 25 is 202,255 sockeye of which an average of 88,535 salmon were considered Chignik bound fish. Since 1992, the SEDM fishery has harvested an average of 5.6 percent of the total Chignik bound sockeye salmon harvest through July 25.

In 1996 and 1997, the SEDM harvest through July 25 was 284,076 and 304,629 sockeye salmon, respectively. The Chignik bound sockeye salmon contribution of the 1996 harvest (127,201 salmon) accounted for 5.9 percent of the total Chignik bound harvest through July 25. In 1997 the Chignik contribution was zero because no commercial fishing periods targeting Chignik bound sockeye were allowed through July 25 in the SEDM fishery. In 1996, through July 25, 64 set gillnet and 25 purse seine permit holders participated in the fishery, and in 1997, 57 set gillnet and 12 purse seine permits were fished through July 25 in the SEDM.

In 1996 and 1997, Orzinski Lake had estimated escapements of 30,000 and 35,000 sockeye salmon, respectively. The 1990-97 average sockeye escapement into Orzinski Lake is 29,715 salmon.

The 1996 Northwest Stepovak Section annual sockeye harvest was 144,882 salmon, of which 132,032 sockeye were caught after June 30 and considered 100 percent local fish. The entire 1997 Northwest Stepovak Section sockeye harvest of 315,920 salmon was caught after June 30 (304,629 sockeye were caught from July 1 through July 25) and therefore considered 100 percent local fish.

**KEY WORDS:** Southeastern District Mainland, Orzinski Lake, sockeye salmon, Northwest Stepovak Section.

## INTRODUCTION

The Southeastern District Mainland (SEDM) fishery of Area M is located on the south side of the Alaska Peninsula (Figure 1). Included in this fishery are the Beaver Bay, Balboa Bay, Southwest Stepovak, Northwest Stepovak, East Stepovak, and Stepovak Flats Sections (Figure 2). Under the present Alaska Board of Fisheries (BOF) management plan adopted during the January 1996 meeting, beginning July 1 the Northwest Stepovak Section will be managed entirely on local stocks, and before July 1 on the Chignik sockeye salmon allocation 5AAC 09.360(a)(1) and (b)-(h). The Stepovak Flats Section will continue to be managed on local stocks the entire season, and the remainder of the area is managed, through July 25, on an allocation based on the strength of the Chignik River sockeye runs within the Chignik Management Area (CMA; Appendix A). After July 25, the entire SEDM area is managed on local stocks.

Since 1978, set gillnet gear is the only legal gear type allowed through July 10 (Table 1). During the last ten years (1988-97), set gillnet fishers have taken about 90% of the total SEDM sockeye harvest through July 25, and purse seine fishers have harvested the remaining 10% ; (Table 2; Figure 3).

Fishing effort during June and most of July primarily targets Chignik bound sockeye salmon. The Orzinski Lake sockeye run in the Northwest Stepovak Section and July chum salmon runs in the Stepovak Flats Section are targeted to a lesser degree. The peak of the local pink and chum salmon runs occur during late July through mid August. The fishery is usually closed during mid to late August to achieve desired pink and chum escapement goals and is reopened in September to harvest coho salmon. Sockeye salmon are known to migrate through the area during the entire season (Campbell 1997).

Additional tables not mentioned in the text have been prepared illustrating historical effort, harvests, and regulations for the SEDM fishery. These summaries are located in Appendices B and C of this report.

## RECENT HISTORY

Prior to 1974, the SEDM fishery was regulated by set weekly fishing periods which were generally five days per week in duration. From 1974 through 1977, the fishery was open on a day per day basis with Chignik Lagoon. During some years, such as 1977, only short fishing periods were required to harvest large runs in Chignik Lagoon while daily harvest rates and the total harvest in the SEDM fishery were low.

In 1978, the BOF restricted fishing periods to three days per week for set gillnet gear only through July 10. In 1978, harvest rates through July 25 were low despite strong Chignik runs, resulting in a SEDM catch of only 31,197 sockeye, of which 21,952 sockeye were considered Chignik bound salmon (Tables 3 and 4). From 1973 through 1978, an average



of 20 set gillnet and 17 purse seine fishers participated in this fishery through July 25 (Figures 4 and 5).

Beginning with the 1979 season, the BOF increased fishing time from three days to five days per week but specified that not more than 60,000 estimated Chignik sockeye salmon could be harvested through July 10. The BOF stipulated that the fishery could be closed if it became apparent that the Chignik escapement requirements were not assured. The BOF also stated that if the CMA catch exceeded 1,000,000 sockeye before July 10, the SEDM fishery could continue beyond the 60,000 sockeye salmon ceiling. This management plan remained in effect until 1985.

From 1979 through 1982, the annual SEDM sockeye harvest averaged 76,000 salmon, with about 61,000 sockeye (5.1% of the total Chignik bound sockeye harvest) caught through July 25 (Table 3; Figure 6). These harvests were achieved in spite of numerous fishery closures imposed by the department because of poor Chignik sockeye escapements. Set gillnet permit activity, through July 25, increased from 23 permits in 1978 to 37 permits in 1982.

In 1983, an estimated 227,392 Chignik bound sockeye salmon were harvested in the SEDM fishery through July 25. Most of the sockeye harvest (76%) occurred after July 10.

In 1984, set gillnet effort increased to 54 permits through July 25, of which five were operated by purse seine permit holders. Due to an exceptionally strong early Chignik run, the large number of fish available in the SEDM area, and high gear levels, only six fishing days were required to harvest an estimated 60,000 Chignik bound sockeye salmon. The SEDM fishery was closed for only three days and was reopened on June 14 when the Chignik sockeye harvest reached 1,000,000 salmon. In 1984, the late Chignik sockeye salmon run was weaker than predicted, and the second run escapement goal was reached only after considerable curtailment of the SEDM, Chignik, and Cape Igvak (Kodiak Management Area) fisheries during mid-July. The total 1984 SEDM harvest of Chignik bound sockeye salmon through July 25 was 423,068 fish (Table 4).

For the 1985 season, the BOF developed a management plan based on the Cape Igvak Salmon Management Plan instead of using a set fishing schedule. The BOF plan directed the department to manage the fishery so that the number of sockeye salmon taken in the SEDM fishery (exclusive of the Northwest Stepovak Section) was as near as possible to 6.2% of the total Chignik bound sockeye salmon harvest through July 25 (Figure 7). The department re-evaluated the data used to calculate the allocation and determined that 6.0% was the correct figure. The BOF changed the allocation, based on the revised data, to 6.0% beginning with the 1988 season. However, before the SEDM fishery could open the following criteria had to be met:

- 1) a forecasted harvestable surplus beyond the escapement goals for the first and second runs of Chignik River system sockeye was expected to be more than 600,000, and

- 2) the department determined that the runs were as strong as expected.

In years when a harvestable surplus for the first and second runs of Chignik River system sockeye salmon was expected to be less than 600,000, no commercial salmon fishery targeting Chignik sockeye salmon would be allowed in the SEDM fishery until a harvest of 300,000 sockeye salmon was achieved in the Chignik Area. After July 8, fishing in the SEDM might occur provided at least 300,000 sockeye salmon had been harvested in the Chignik Area, escapement goals were being met, and the Chignik Area harvest was anticipated to total at least 600,000 sockeye salmon. In addition, the number of sockeye salmon taken in the SEDM fishery needed to be as near as possible to 6.0% of the total Chignik bound sockeye salmon harvest through July 25.

From 1985 through 1991, the harvest of Chignik bound sockeye in the SEDM, through July 25, averaged 88,776 salmon, 5.5% of the total Chignik bound sockeye harvest, and ranged from 4,485 salmon in 1989 to 152,714 sockeye salmon in 1991 (Table 5).

The BOF revised the SEDM management plan for the 1992 season. The revised plan was in effect from 1992 through 1995, and included two significant changes as follows:

- 1) the area in the Northwest Stepovak Section to be managed on a local stock basis was reduced to include only the waters of Orzinski Bay; the Stepovak Flats Section would continue to be managed on the basis of the Stepovak River chum salmon stock (Figure 8).
- 2) the allowable harvest of sockeye salmon in the SEDM fishery (exclusive of Orzinski Bay) through July 25, was increased from 6.0% to 7.0% of the total Chignik bound sockeye salmon catch.

From 1992 through 1995, the harvest of Chignik bound sockeye in the SEDM, through July 25, averaged 113,258 salmon and 6.9% of the total Chignik bound sockeye salmon harvest.

## **CURRENT MANAGEMENT PLAN**

During the January 1996 meeting the BOF made the following changes to the SEDM salmon management plan (Figure 9):

- 1) the area to be managed for local Orzinski Lake sockeye salmon increased from only Orzinski Bay to the entire Northwest Stepovak Section (Figure 2). Prior to July 1, the entire Northwest Stepovak Section will be managed on an allocation based on the strength of the Chignik sockeye salmon runs as described in 5 AAC 09.360(a)(1) and (b)-(h). Beginning July 1, the Northwest Stepovak Section will be managed entirely on local stocks. The Stepovak Flats Section will continue to be managed on the basis of the Stepovak River chum salmon stocks.

- 2) the percentage of sockeye salmon allocated to the SEDM fishery was decreased from 7.0% to 6.0% of the total Chignik bound sockeye harvest through July 25. This BOF action was taken in an attempt to maintain traditional harvest levels of Chignik bound sockeye in the SEDM fishery and to compensate for the increased area managed for local Orzinski Lake sockeye salmon.
- 3) the BOF established a closed waters area encompassing Kupreanof Point, as described in 5 AAC 09.350(38), from July 6 through August 31 (Figure 10).

The total Chignik sockeye salmon harvest is 100% of those sockeye caught within the CMA, 80% of those sockeye caught in the Cape Igvak Section of the KMA through July 25, and 80% of those sockeye caught in the SEDM fishery through July 25, excluding 100% of those sockeye caught within the Northwest Stepovak Section from July 1 through July 25.

Management attempts to reach the 6.0% sockeye salmon allocation on July 10, and again on July 25, to achieve an equitable allocation of harvest between set gillnet and purse seine gear.

There are two distinct sockeye salmon runs into the Chignik River system; the Black Lake run and the Chignik Lake run. Based on previous tagging studies, the two runs overlap in run timing from about June 26 through July 8. During the overlap period, the strength of the second run (Chignik Lake) cannot be evaluated. In order to prevent overharvest of the second run, the Cape Igvak and SEDM fisheries (except the Northwest Stepovak Section beginning July 1) are usually closed during this period. However, fishing may be allowed to continue in Chignik to harvest excess early run sockeye salmon, even though second run fish are present.

During the past ten years (1988-97), the SEDM harvest of Chignik bound sockeye salmon through July 25 averaged 88,535 fish (6.2% of the total Chignik bound harvest (Table 3; Figure 6). From 1988 through 1997, set gillnet permit holders averaged about 88% of the SEDM harvest of Chignik bound sockeye, through July 25, with purse seine permit holders taking the remaining 12% (Table 4). The 1997 SEDM harvest of Chignik bound sockeye through July 25 was zero (0% of the total Chignik bound harvest) since no commercial fishing periods targeting Chignik bound sockeye were allowed through July 25 in the SEDM fishery because of poor sockeye run strength in Chignik.

## **EFFORT LEVELS**

Since 1978, a substantial increase in set gillnet effort has occurred in the SEDM fishery. The number of set gillnet permits fished through July 25 increased from 23 permits in 1978 to a high of 64 in 1993, with 57 permit fished in 1997 (Figure 5). The number of set gillnet permits fished in the SEDM, through July 25, averaged 51 from 1985 through 1991, 59 from 1992 through 1995, and 61 during 1996 and 1997 (Table 5). Previously, many fishers participated in both set gillnet and purse seine fishing, and received a limited entry permit

for each gear type. During the 1970s and 1980s, many of the dual permit holders sold or transferred their set gillnet permits and retained their purse seine permits. This action increased effort in the SEDM fishery, since many permits which were previously used part-time were now fished full-time.

The number of SEDM set gillnet landings, through July 25, have also increased from 189 in 1978 to a high of 1,657 in 1984, with 1,171 landings made in 1997. Set gillnet landings in the SEDM, through July 25, averaged 440 from 1985 through 1991, 702 from 1992 through 1995, and 1,168 during 1996 and 1997 (Table 5). During the past ten years the number of SEDM set gillnet landings has averaged 663 through July 25 (Figure 11). The increased deliveries also reflects efforts to meet industry's improved quality standards.

Purse seine effort through July 25 has fluctuated dramatically since 1986, and ranged from 0 in 1994 to a high of 69 in 1990, with 12 permits fished in 1997. The number of purse seine permits fished in the SEDM, through July 25, averaged 28 from 1985 through 1991, 21 from 1992 through 1995, and 19 during 1996 and 1997 (Table 5; Figure 12).

The number of SEDM purse seine landings, through July 25, has also fluctuated dramatically from a high of 145 in 1983 to 0 in 1994, with 23 landings made in 1997. Purse seine landings in the SEDM, through July 25, averaged 56 from 1985 through 1991, 32 from 1992 through 1995, and 35 during 1996 and 1997 (Table 5). During the past ten years the number of SEDM purse seine landings has averaged 50 through July 25 (Figure 11).

## **LOCAL STOCKS FISHERIES**

### ***Northwest Stepovak Section***

Currently, commercial salmon fishing in the Northwest Stepovak Section is managed on the basis of the Orzinski Lake sockeye stock from July 1 through July 25, and after July 25 on local stocks (sockeye, pink, chum, and coho salmon).

Beginning July 1, all sockeye salmon caught within the Northwest Stepovak Section are considered to be of Orzinski Lake stock. Through July 25, 80% of those sockeye salmon caught in the remainder of the SEDM fishery are considered to be from the Chignik River runs. After July 25 the SEDM is managed for local stocks.

Orzinski Lake sockeye salmon escapements were assessed using a weir from 1935 through 1941, and most recently from 1990 through 1997. Based on historical aerial surveys and weir counts, Orzinski Lake sockeye escapement requirements by time periods were developed and implemented beginning with the 1991 season (Table 6). The sockeye escapement goal for Orzinski Lake is 20,000 adult salmon. From 1990 through 1997, the adult sockeye escapement has averaged about 27,000 salmon, and ranged from a high of 40,000 in 1991 to a low of 15,000 in 1990. Since 1990, July 10 is the average date when 50% of the total sockeye escapement requirement of 20,000 adult salmon has been achieved

(Figure 13). In 1997, the Orzinski Lake weir was operated from June 12 through July 26 and 24,938 sockeye (of which 24,369 were adult salmon) were counted through the weir (Table 7). Based on aerial surveys conducted after the weir was removed, an additional 10,062 sockeye were added to the Orzinski Lake weir count for a total sockeye escapement of 35,000 salmon (Table 7).

The 1997 Northwest Stepovak Section sockeye harvest through July 25 was 304,629 salmon, 100% of the sockeye were caught after June 30 and for management purposes considered entirely local fish (Table 5).

### ***Stepovak Flats Section***

Commercial salmon fishing in the Stepovak Flats Section is managed on the basis of chum salmon returning to Stepovak Flats streams. Through July 11, this section is usually opened on a day per day basis with the remainder of the SEDM fishery. Eighty percent of the sockeye harvested in this section are assigned as Chignik bound fish, and included in the 6.0% allocation criteria stated in the current SEDM salmon management plan. The entire section is closed to salmon fishing by regulation beginning July 29 to protect schooling chum salmon which are needed to achieve escapement requirements. The Stepovak Flats Section was closed to commercial salmon fishing during the entire 1997 season to achieve local escapement requirements.

### **1996-97 SEASON SUMMARY**

The 1996 forecast for the total harvest of Chignik bound sockeye salmon was 1,000,000 salmon for the first (Black Lake) run and 1,350,000 salmon for the second (Chignik Lake) run (Owen and Sarafin 1996). The forecast indicated that a fishery may occur in the SEDM targeting Chignik bound sockeye salmon since a harvest of at least 600,000 sockeye (which is one of the conditions of the management plan) was expected in the CMA.

In 1996, the first fishing period in the SEDM occurred on June 11 and the last delivery was made on October 17. A total of 284,076 sockeye salmon were harvested, through July 25, in the entire SEDM, about 90% by set gillnet permit holders and the remaining 10% by purse seine fishers. During 1996, the estimated Chignik component of the SEDM harvest was 127,201 sockeye, 5.9% of the total Chignik bound sockeye salmon harvest through July 25.

The 1997 forecast for the total harvest of Chignik bound sockeye salmon was 600,000 salmon for the first (Black Lake) run and 1,350,000 salmon for the second (Chignik Lake) run (Owen and Sarafin 1997). The forecast indicated that a fishery may occur in the SEDM targeting Chignik bound sockeye salmon since a harvest of at least 600,000 sockeye was expected in the CMA which is one of the conditions of the management plan. Although the 1997 CMA forecast indicated a Chignik harvest of at least 600,000 sockeye the first run failed to develop as predicted and no commercial fishing periods were allowed in the

SEDM targeting Chignik bound sockeye salmon. There were no openings in the SEDM outside of the Northwest Stepovak Section through July 25. Therefore, the 1997 Chignik component of the SEDM harvest was zero

In 1997, the first fishing period in the SEDM occurred on July 6 and the last delivery was made on October 17. Through July 25, a total of 304,269 sockeye salmon were harvested in the entire SEDM, 96% by set gillnet permit holders and the remaining 4% by purse seine fishers.

### **SEASON OUTLOOK 1998**

The outlook for the 1998 sockeye salmon harvest in the SEDM is based on the CMA preliminary sockeye salmon forecast (Appendix A), and uses the current 6.0% allocation figure for the SEDM fishery.

The 1998 preliminary CMA forecast estimates an early run (Black Lake) harvest of 500,000 sockeye, a late run (Chignik Lake) harvest of 850,000 sockeye, for a total estimated Chignik harvest of 1,350,000 sockeye salmon.

During the past ten years (1988-97), the total harvest of sockeye through July 25 has averaged about 80% of the estimated Chignik bound annual harvest. Therefore, assuming that 80% of the total estimated Chignik sockeye harvest for 1998 will occur before July 26, the SEDM (less the Northwest Stepovak harvest beginning July 1) 6% allocation converts into a potential Chignik bound sockeye harvest of approximately 65,000 salmon through July 25, which is below the most recent ten average harvest of 88,535 sockeye salmon.

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Table 1. Southeastern District Mainland sockeye salmon catch, by gear, through July 10, 1970-97.

Year	Set Gillnet <sup>a</sup>		Purse Seine		Total Catch
	Number	Percent	Number	Percent	
1970	76,251	95.8	3,357	4.2	79,608
1971	48,523	97.5	1,240	2.5	49,763
1972	14,874	96.8	490	3.2	15,364
1973	35,130	98.0	703	2.0	35,833
1974	47,924	79.2	12,610	20.8	60,534
1975	0	0.0	0	0.0	0
1976	50,385	93.9	3,276	6.1	53,661
1977	21,981	73.0	8,132	27.0	30,113
1978	25,449	100.0	0	0.0	25,449
1979	38,200	100.0	0	0.0	38,200
1980	51,365	100.0	0	0.0	51,365
1981	133,371	100.0	0	0.0	133,371
1982	60,386	100.0	0	0.0	60,386
1983	121,625	100.0	0	0.0	121,625
1984	532,151	100.0	0	0.0	532,151
1985	61,160	100.0	0	0.0	61,160
1986	140,329	100.0	0	0.0	140,329
1987	216,609	100.0	0	0.0	216,609
1988	17,924	100.0	0	0.0	17,924
1989	11,728	100.0	0	0.0	11,728
1990	20,177	100.0	0	0.0	20,177
1991	251,386	100.0	0	0.0	251,386
1992	134,978	100.0	0	0.0	134,978
1993	135,950	100.0	0	0.0	135,950
1994	177,938	100.0	0	0.0	177,938
1995	72,484	100.0	0	0.0	72,484
1996	194,535	100.0	0	0.0	194,535
1997	84,206	100.0	0	0.0	84,206
<b>Averages</b>					
1978-97	124,098	100.0	0	0.0	124,098
1988-97	110,131	100.0	0	0.0	110,131

<sup>a</sup> Only set gillnet gear is allowed prior to July 11 since the 1978 season. After 1977, any purse seine deliveries prior to July 11 are assumed to be in error and were assigned to set gillnet gear.



Table 2. Southeastern District Mainland sockeye salmon catch, by gear, through July 25, 1970-97.

Year	Set Gillnet <sup>a</sup>		Purse Seine		Total Catch
	Number	Percent	Number	Percent	
1970	80,383	95.4	3,911	4.6	84,294
1971	60,767	95.9	2,599	4.1	63,366
1972	19,491	92.4	1,614	7.6	21,105
1973	46,603	97.9	976	2.1	47,579
1974	70,433	76.1	22,129	23.9	92,562
1975	1,807	57.3	1,349	42.7	3,156
1976	54,120	90.4	5,724	9.6	59,844
1977	33,943	69.9	14,646	30.1	48,589
1978	29,070	92.8	2,267	7.2	31,337
1979	79,432	87.7	11,159	12.3	90,591
1980	89,769	92.9	6,896	7.1	96,665
1981	182,527	90.2	19,883	9.8	202,410
1982	79,442	91.5	7,351	8.5	86,793
1983	215,280	71.2	87,107	28.8	302,387
1984	567,043	95.3	28,001	4.7	595,044
1985	78,347	96.8	2,610	3.2	80,957
1986	196,545	95.2	9,987	4.8	206,532
1987	244,413	99.8	482	0.2	244,895
1988	77,204	95.1	3,956	4.9	81,160
1989	46,977	52.7	42,247	47.3	89,224
1990	85,368	51.3	80,954	48.7	166,322
1991	275,768	95.2	13,959	4.8	289,727
1992	214,638	99.6	806	0.4	215,444
1993	186,656	88.5	24,271	11.5	210,927
1994	221,657	100	0	0	221,657
1995	139,515	87.5	19,866	12.5	159,381
1996	276,212	97.3	7,864	2.7	284,076
1997	293,514	96.4	11,115	3.6	304,629
<b>Averages</b>					
1978-97	178,969	90.4	19,039	9.6	198,008
1988-97	181,751	89.9	20,504	10.1	202,255

<sup>a</sup> Only set gillnet gear is allowed prior to July 11 since 1978 season.

Table 3. Harvest of Chignik bound sockeye salmon, through July 25, in the Chignik, Cape Igvak, and Southeastern District Mainland Areas from 1964-97.<sup>a</sup>

Year	Chignik Area		Cape Igvak		Southeastern District Mainland Area		Total
	Catch	Percent	Catch	Percent	Catch	Percent	
1964 <sup>b</sup>	556,890	90.57	14,980	2.44	43,021	7	614,891
1965	599,553	89.94	11,021	1.65	56,020	8.4	666,594
1966	219,794	87.99	18,003	7.21	12,011	4.81	249,808
1967	462,000	91.48	23,014	4.56	20,021	3.96	505,035
1968	977,382	82.53	135,951	11.48	70,959	5.99	1,184,292
1969	394,135	78.96	97,982	19.63	7,013	1.41	499,130
1970 <sup>c</sup>	1,325,734	72.51	434,394	23.76	68,181	3.73	1,828,309
1971	1,016,136	80.33	197,614	15.62	51,272	4.05	1,265,022
1972	378,218	87.99	33,865	7.88	17,752	4.13	429,835
1964-72 catch and percentage figures are total for the entire season. Catch figures and percentages after 1972 are only through July 25.							
1973 <sup>d</sup>	769,258	88.97	57,348	6.63	37,983	4.39	864,589
1974	530,278	73.61	122,071	16.95	68,029	9.44	720,378
1975	115,984	81.78	23,635	16.67	2,205	1.55	141,824
1976	792,024	82.96	117,926	12.35	44,730	4.69	954,680
1977	1,547,285	90.40	128,852	7.53	35,502	2.07	1,711,639
1978 <sup>e,f</sup>	1,454,389	85.38	227,014	13.33	22,064	1.30	1,703,467
1979 <sup>g</sup>	794,504	91.81	13,950	1.61	56,878	6.57	865,332
1980	670,001	91.31	32	0.00	63,724	8.68	733,757
1981	1,606,300	79.85	282,727	14.06	122,533	6.09	2,011,560
1982	1,250,768	84.46	167,401	11.30	62,767	4.24	1,480,936
1983	1,450,832	72.68	318,048	15.93	227,392	11.39	1,996,272
1984	2,474,405	73.93	449,372	13.43	423,068	12.64	3,346,845
1985 <sup>h</sup>	696,169	79.91	123,627	14.19	51,421	5.60	871,217
1986	1,456,729	82.64	188,017	10.67	118,006	6.69	1,762,752
1987	1,659,615	77.99	321,506	15.11	146,886	6.90	2,128,007
1988	675,487	95.67	11,218	1.59	19,320	2.74	706,025
1989	496,044	99.10	0	0.00	4,485	0.90	500,529
1990	1,205,575	83.61	107,706	7.47	128,599	8.92	1,441,880
1991 <sup>i</sup>	1,958,954	80.42	324,329	13.31	152,714	6.27	2,435,997
1992 <sup>j</sup>	1,054,309	81.07	152,358	11.72	93,845	7.22	1,300,512
1993	1,495,098	77.72	300,055	15.60	128,536	6.68	1,923,689
1994 <sup>k</sup>	1,632,435	80.61	250,230	12.36	142,350	7.03	2,025,015
1995	1,024,785	79.90	169,530	13.22	88,301	6.88	1,282,616
1996 <sup>l</sup>	1,714,566	79.74	308,327	14.34	127,201	5.92	2,150,094
1997	443,892	100.00	0	0.00	0	0.00	443,892

<sup>a</sup> The Cape Igvak and Southeastern District Mainland figures represent 80% of the total sockeye catches for those areas based on the premise that 80% of the sockeye caught in the Cape Igvak Section and the Southeast District Mainland Area (excluding sockeye caught in Northwest Stepovak Section from 1964-1991 and in the Northwest Stepovak section during July 1996-97, and in Orzinski Bay from 1992 - 95) are destined for Chignik.

-Continued-

Table 3. (page 2 of 3)

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<sup>b</sup> The data from 1964-1972 are based on total yearly catches. Prior to 1973, Cape Igvak and Southeastern District Mainland fisheries were set by regulation to weekly fishing periods, usually 5 days per week. Time modifications were implemented when poor escapements occurred at Chignik.

<sup>c</sup> Catches (1970-1992) were updated using historical electronic fish ticket databases.

<sup>d</sup> During 1973-1977 all three fisheries were managed on a day by day basis.

<sup>e</sup> From 1978-1997, the Cape Igvak Fishery management Plan allocated 15 percent of the total sockeye catch destined for Chignik.

<sup>f</sup> During 1978, seining prior to July 11 was disallowed in the Southeastern District Mainland. The set gillnet fishery was allowed to fish 3 days per week through July 10 after which the fishery was managed on the basis of local stocks.

<sup>g</sup> During 1979-1984 and prior to July 11, fishing was allowed 5 days per week in the Southeastern District Mainland Area with a ceiling of an estimated 60,000 sockeye destined for Chignik. If the Chignik Area sockeye catch was 1,000,000 or more before July 11, the 60,000 ceiling was to be dropped.

<sup>h</sup> During 1985-1988, Southeastern District Mainland Area (excluding the Northwest Stepovak Section from 1964-1991 and Orzinski Bay statistical area) was placed on an allocation of 6.2 percent of the total estimated Chignik sockeye catch through July 25. After July 25, the Southeastern District Mainland is managed on a local stock basis. The allocation changed to 6.0 percent beginning in 1988. Seining is still not allowed prior to July 11.

<sup>i</sup> Includes overescapement of 278,305 sockeye counted past the weir during the Chignik Area seiners' boycott (Jun 23-Jul 4).

<sup>j</sup> Review of Orzinski Lake historical and current escapement records led the Alaska Board of Fisheries (BOF) to redefine the Southeastern District Mainland Management Plan. Beginning in 1992, the Southeastern District Mainland fishery (excluding Orzinski Bay) was placed on an allocation of 7.0 percent of the total estimated Chignik sockeye catch through July 25.

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-Continued-

Table 3. ( page 3 of 3).

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<sup>k</sup> Includes overescapement of 208,921 sockeye counted past the weir during the Chignik Area seiners' strike (Jun 22-June 25).

<sup>l</sup> During the January 1996 meeting the BOF increased the area to be managed for local Orzinski Lake sockeye salmon from only Orzinski Bay to the entire Northwest Stepovak Section. Prior to July 1, the entire Northwest Stepovak Section will be managed on an allocation based on the strength of the Chignik sockeye salmon runs. Beginning July 1, the Northwest Stepovak Section will be managed entirely on local stocks. The BOF also decreased the percentage of sockeye salmon allocated to the SEDM fishery from 7% to 6% to attempt to maintain traditional harvest levels of Chignik bound sockeye in the SEDM fishery.

Table 4. Chignik sockeye salmon contribution to the Southeastern District Mainland harvest, by gear, through July 25, 1970-97.<sup>a,b</sup>

Year	Set Gillnet		Purse Seine		Total Catch
	Number	Percent	Number	Percent	
1970	63,688	94.2	3,894	5.8	67,582
1971	48,575	95.9	2,066	4.1	50,641
1972	15,593	92.4	1,291	7.6	16,884
1973	36,870	98.0	743	2.0	37,613
1974	52,798	81.8	11,766	18.2	64,564
1975	1,126	51.1	1,079	48.9	2,205
1976	40,399	93.2	2,957	6.8	43,356
1977	23,924	76.0	7,574	24.0	31,498
1978	20,174	91.9	1,778	8.1	21,952
1979	50,610	91.4	4,742	8.6	55,352
1980	58,190	91.5	5,380	8.5	63,570
1981	106,811	87.6	15,059	12.4	121,870
1982	57,646	91.8	5,121	8.2	62,767
1983	157,831	69.4	69,561	30.6	227,392
1984	404,738	95.7	18,330	4.3	423,068
1985	49,523	96.3	1,898	3.7	51,421
1986	110,572	93.7	7,434	6.3	118,006
1987	146,636	99.8	250	0.2	146,886
1988	16,465	85.2	2,855	14.8	19,320
1989	4,371	97.5	114	2.5	4,485
1990	65,671	51.1	62,928	48.9	128,599
1991	152,454	99.8	260	0.2	152,714
1992	93,564	99.7	281	0.3	93,845
1993	109,119	84.9	19,417	15.1	128,536
1994	142,350	100.0	0	0.0	142,350
1995	73,863	83.6	14,438	16.4	88,301
1996 <sup>c</sup>	123,625	97.2	3,576	2.8	127,201
1997 <sup>c</sup>	0	0.0	0	0.0	0
Averages					
1978-97	97,211	89.3	11,671	10.7	108,882
1988-97	78,148	88.3	10,387	11.7	88,535

<sup>a</sup> From 1970-91, the Chignik contribution is 80% of the sockeye salmon harvested in Beaver Bay, Balboa Bay, Southwest Stepovak, Stepovak Flats and East Stepovak Sections.

<sup>b</sup> From 1992-95, the Chignik contribution is 80% of the sockeye salmon harvested in the Southeastern District Mainland fishery except Orzinski Bay where 100% of the sockeye salmon are considered local production.

<sup>c</sup> In 1996 and 1997, the Chignik contribution is 80% of the sockeye harvested in Southeastern District Mainland fishery, except beginning July 1, in the Northwest Stepovak Section where 100% of the sockeye salmon are considered local.

Table 5. Southeastern District Mainland, effort and assignment of sockeye salmon harvests June 1 - July 25, 1985-97.

Year	Effort				Northwest Stepovak			SEDM minus Northwest Stepovak		SEDM		Total Catch
	Set GN	Lndgs	PS	Lndgs	Total	(Local)	(Non-local)	(Local)	(Non-local)	(Local)	(Non-local)	
1985 <sup>a</sup>	49	367	23	51	16,681	16,681	0	12,855	51,421	29,536	51,421	80,957
1986	42	616	18	29	59,025	59,025	0	29,501	118,006	88,526	118,006	206,532
1987	53	528	6	9	61,287	61,287	0	36,722	146,886	98,009	146,886	244,895
1988	41	300	16	45	57,010	57,010	0	4,830	19,320	61,840	19,320	81,160
1989	67	248	25	54	83,618	83,618	0	1,121	4,485	84,739	4,485	89,224
1990	46	277	69	131	3,279	3,279	0	32,609	128,599	35,888	128,599	164,487
1991	59	747	39	71	98,834	98,834	0	38,179	152,714	137,013	152,714	289,727
1992 <sup>b</sup>	59	650	6	14	113,428	101,198	12,232	20,403	81,613	121,599	93,845	215,444
1993	64	763	53	82	73,747	54,955	18,792	27,436	109,744	82,391	128,536	210,927
1994	56	678	0	0	89,522	52,880	36,642	26,427	105,708	79,307	142,350	221,657
1995	58	718	26	30	62,598	51,723	10,875	19,357	77,426	71,079	88,301	159,381
1996 <sup>c</sup>	64	1,164	25	46	137,925	127,645	10,280	29,230	116,921	156,875	127,201	284,076
1997 <sup>c</sup>	57	1,171	12	23	304,629	304,629	0	0	0	304,629	0	304,629
Average:												
1985-91	51	440	28	56	54,248	54,248	0	22,260	88,776	76,507	88,776	165,283
1992-95	59	702	21	32	84,824	65,189	19,635	23,406	93,623	88,594	113,258	201,852
1996-97	61	1,168	19	35	221,277	216,137	5,140	14,615	58,461	230,752	63,601	294,353

<sup>a</sup> From 1970 through 1991, the Chignik contribution is 80% of the sockeye salmon harvested in Beaver Bay, Balboa Bay, Southwest Stepovak, Stepovak Flats, and East Stepovak Sections.

<sup>b</sup> From 1992 through 1995, the Chignik contribution is 80% of the sockeye salmon harvested in the Southeastern District Mainland fishery, except Orzinski Bay where 100% of the sockeye salmon are considered local production.

<sup>c</sup> In 1996 and 1997, the Chignik contribution is 80% of the sockeye harvested in Southeastern District Mainland fishery, except beginning July 1, in the Northwest Stepovak Section where 100% of the sockeye salmon are considered local.

Table 6. Sockeye salmon escapement requirements for Orzinski Lake.

Date	Numbers of Fish
June 15	0
July 1	2,000
July 9	5,000
July 16	10,000
July 23	15,000
August 7	20,000
Season Total	20,000

Table 7. Sockeye salmon daily and cumulative counts through Orzinski Lake weir, 1997.

Date	Daily			Cumulative		
	Adults	Jacks	Total	Adults	Jacks	Total
June 12-15	0	0	0	0	0	0
16	12	0	12	12	0	12
17	16	1	17	28	1	29
18	0	0	0	28	1	29
19	8	0	8	36	1	37
20	0	0	0	36	1	37
21	20	0	20	56	1	57
22	17	0	17	73	1	74
23	127	1	128	200	2	202
24	8	0	8	208	2	210
25	0	0	0	208	2	210
26	8	0	8	216	2	218
27	11	5	16	227	7	234
28	867	10	877	1,094	17	1,111
29	68	2	70	1,162	19	1,181
30	82	4	86	1,244	23	1,267
July 1	33	0	33	1,277	23	1,300
2	55	4	59	1,332	27	1,359
3	1,691	47	1,738	3,023	74	3,097
4	2,974	76	3,050	5,997	150	6,147
5	10	0	10	6,007	150	6,157
6	5,174	34	5,208	11,181	184	11,365
7	2,495	9	2,504	13,676	193	13,869
8	245	1	246	13,921	194	14,115
9	375	3	378	14,296	197	14,493
10	299	6	305	14,595	203	14,798
11	50	7	57	14,645	210	14,855
12	96	3	99	14,741	213	14,954
13	130	5	135	14,871	218	15,089
14	35	1	36	14,906	219	15,125
15	1,180	28	1,208	16,086	247	16,333
16	933	31	964	17,019	278	17,297
17	306	42	348	17,325	320	17,645
18	1,369	80	1,449	18,694	400	19,094
19	1,208	43	1,251	19,902	443	20,345
20	1,010	42	1,052	20,912	485	21,397
21	1,703	38	1,741	22,615	523	23,138
22	1,253	22	1,275	23,868	545	24,413
23	326	6	332	24,194	551	24,745
24	9	0	9	24,203	551	24,754
25	44	0	44	24,247	551	24,798
26	122	18	140	24,369	569	24,938
Post July 26 <sup>a</sup>	9,790	272	10,062	34,159	841	35,000
Total	34,159	841	35,000	34,159	841	35,000

<sup>a</sup> July 26 was the last day salmon were counted through the weir. Post July 26 escapement was based on aerial surveys and adult to jack salmon ratios for the week of July 20-26.



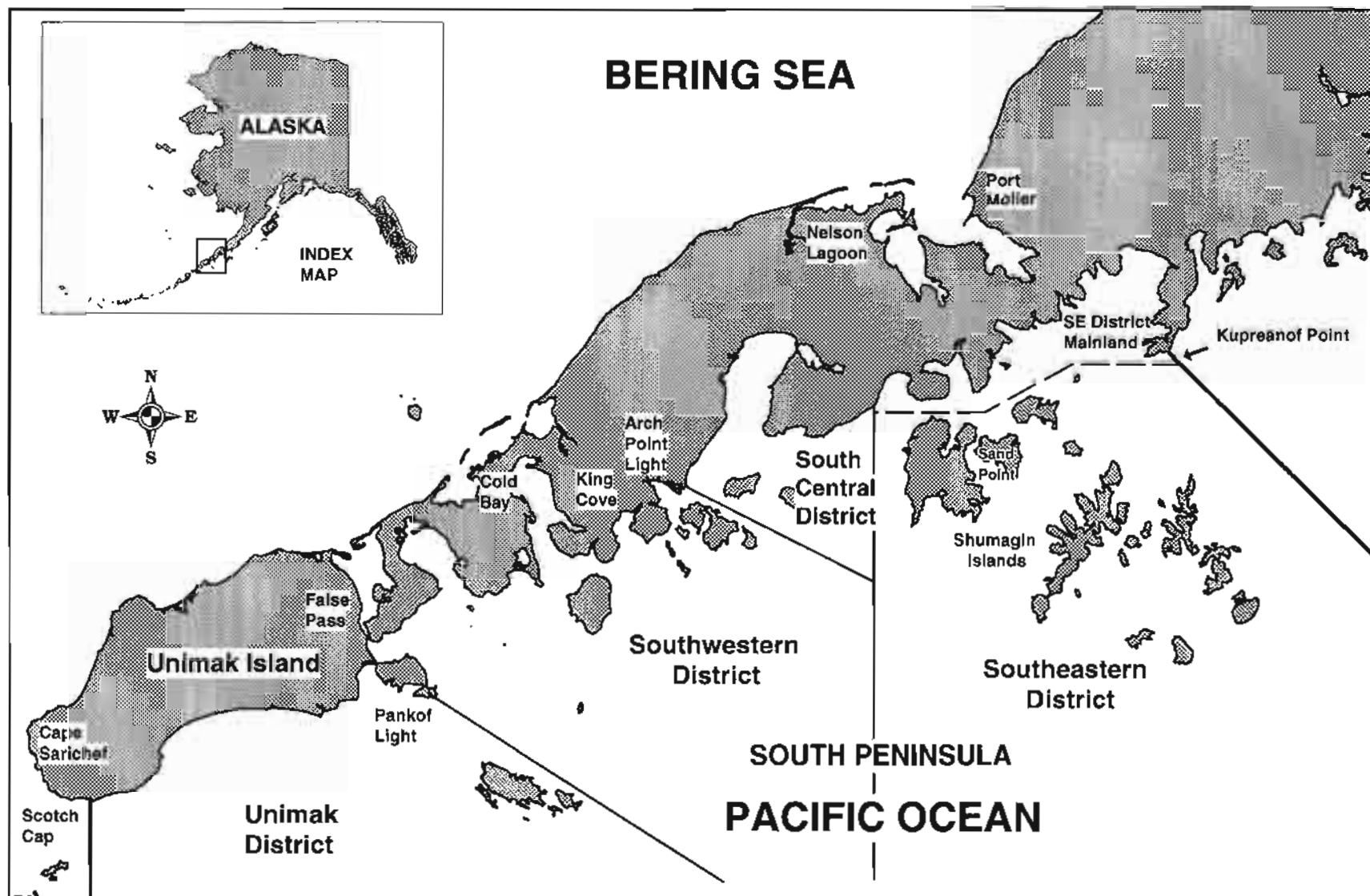


Figure 1. Map of the Alaska Peninsula Management Area from Kupreanof Point to Scotch Cap with the salmon fishing districts defined.

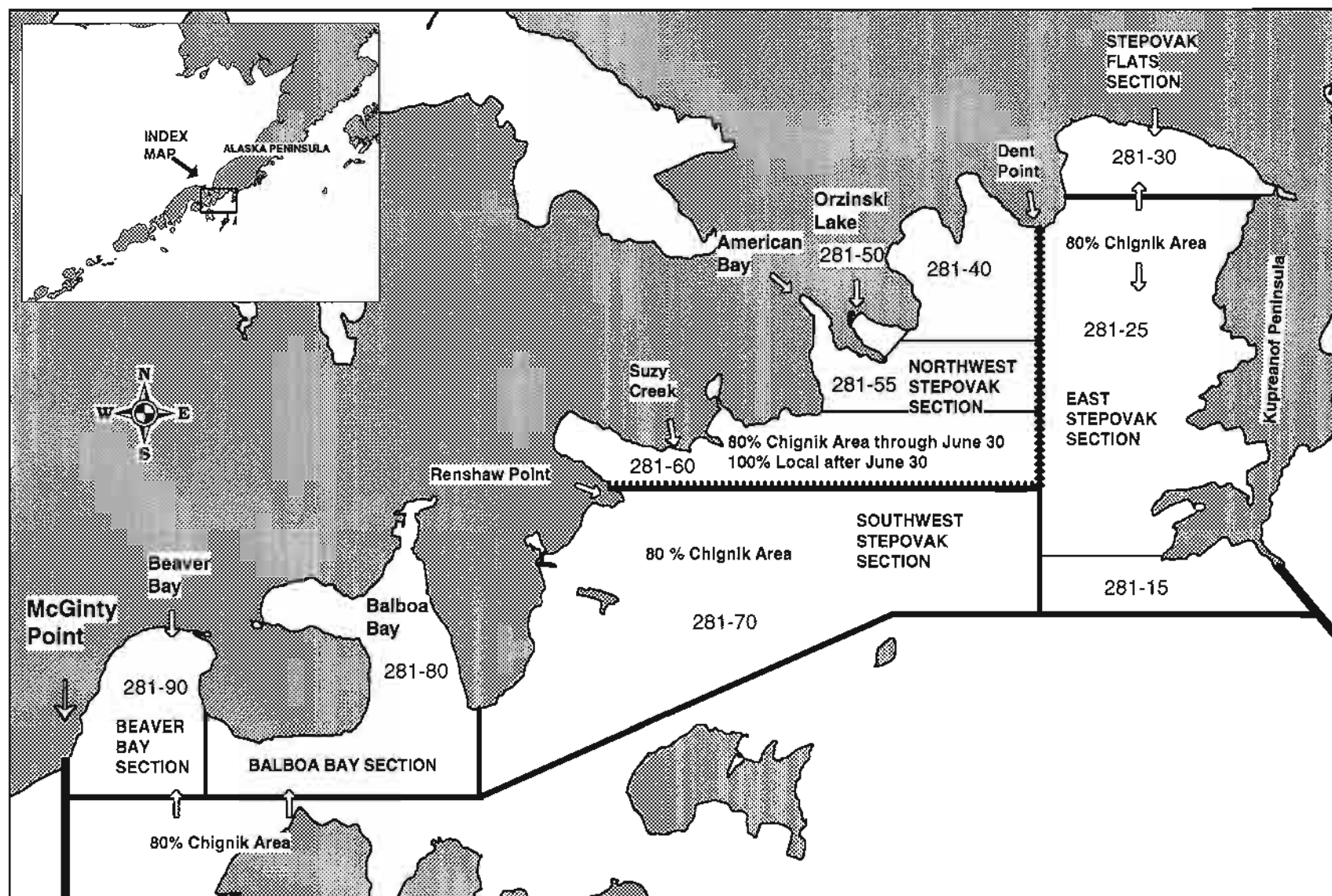


Figure 2. Map of the Southeastern District Mainland fishery from Kupreanof Point to McGinty Point with the salmon sections defined.

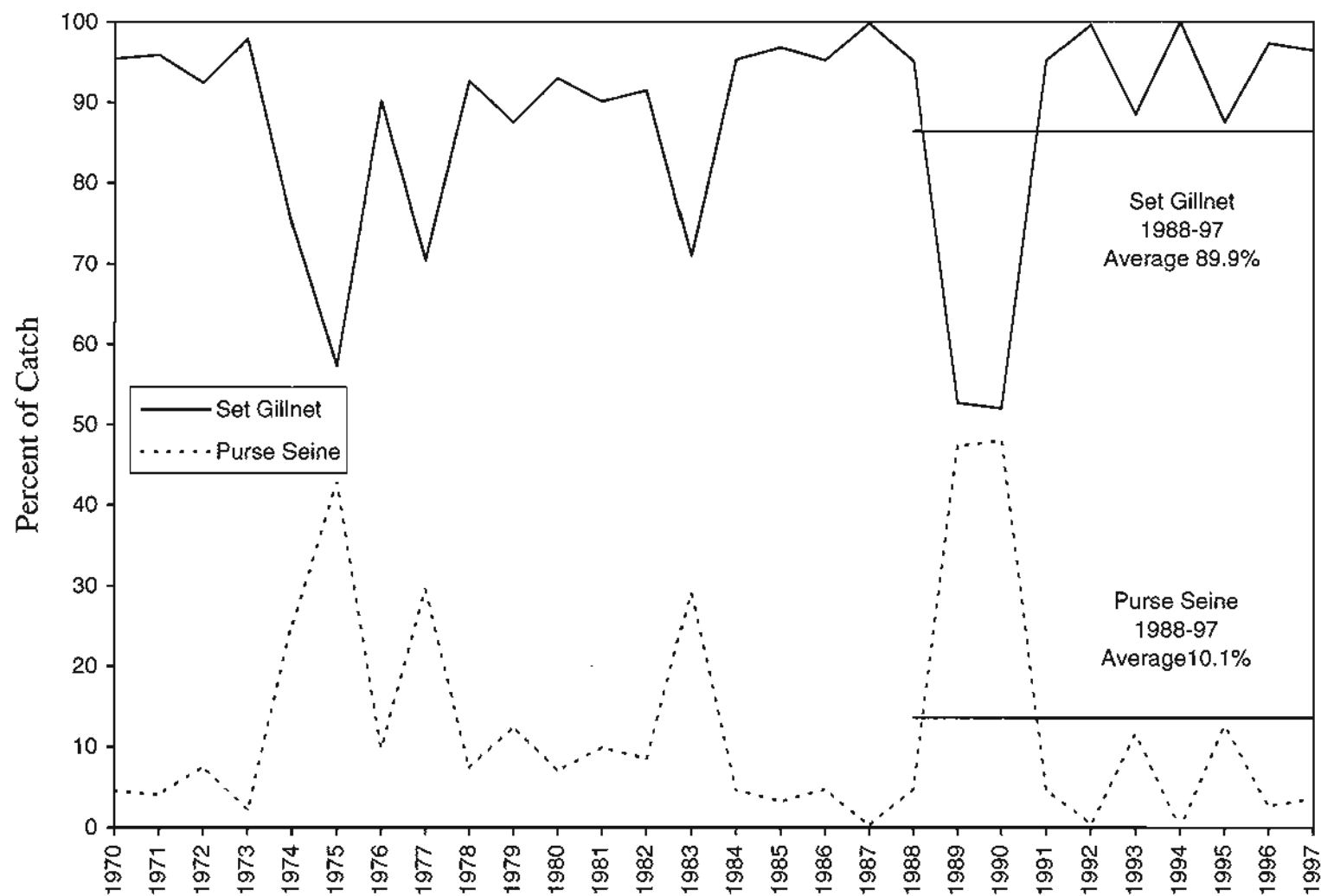


Figure 3. Sockeye salmon catch in percent by gear type, through July 25, Southeastern District Mainland, 1970-97.

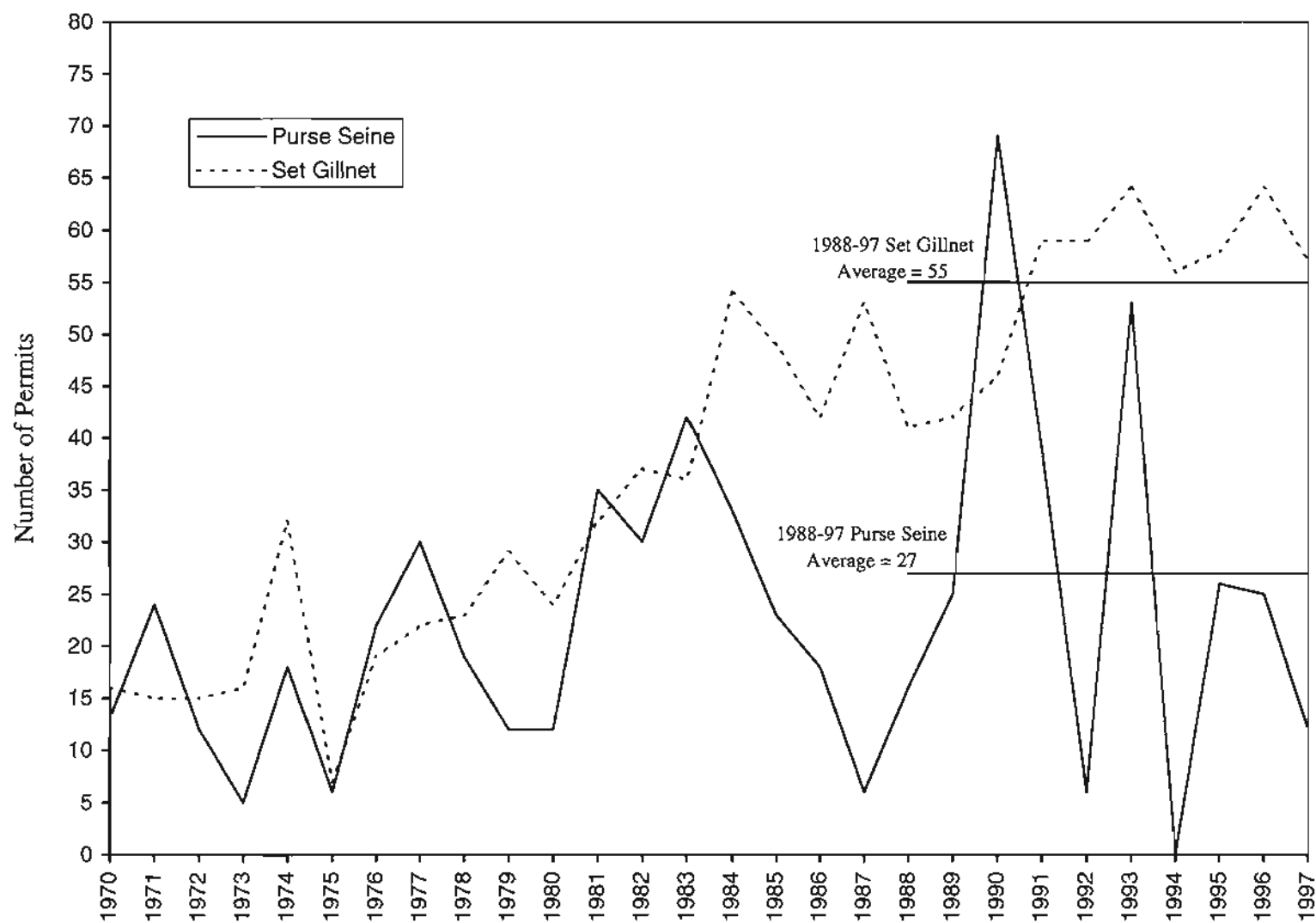


Figure 4. Southeastern District Mainland CFEC permits fished by gear through July 25, 1970-97.

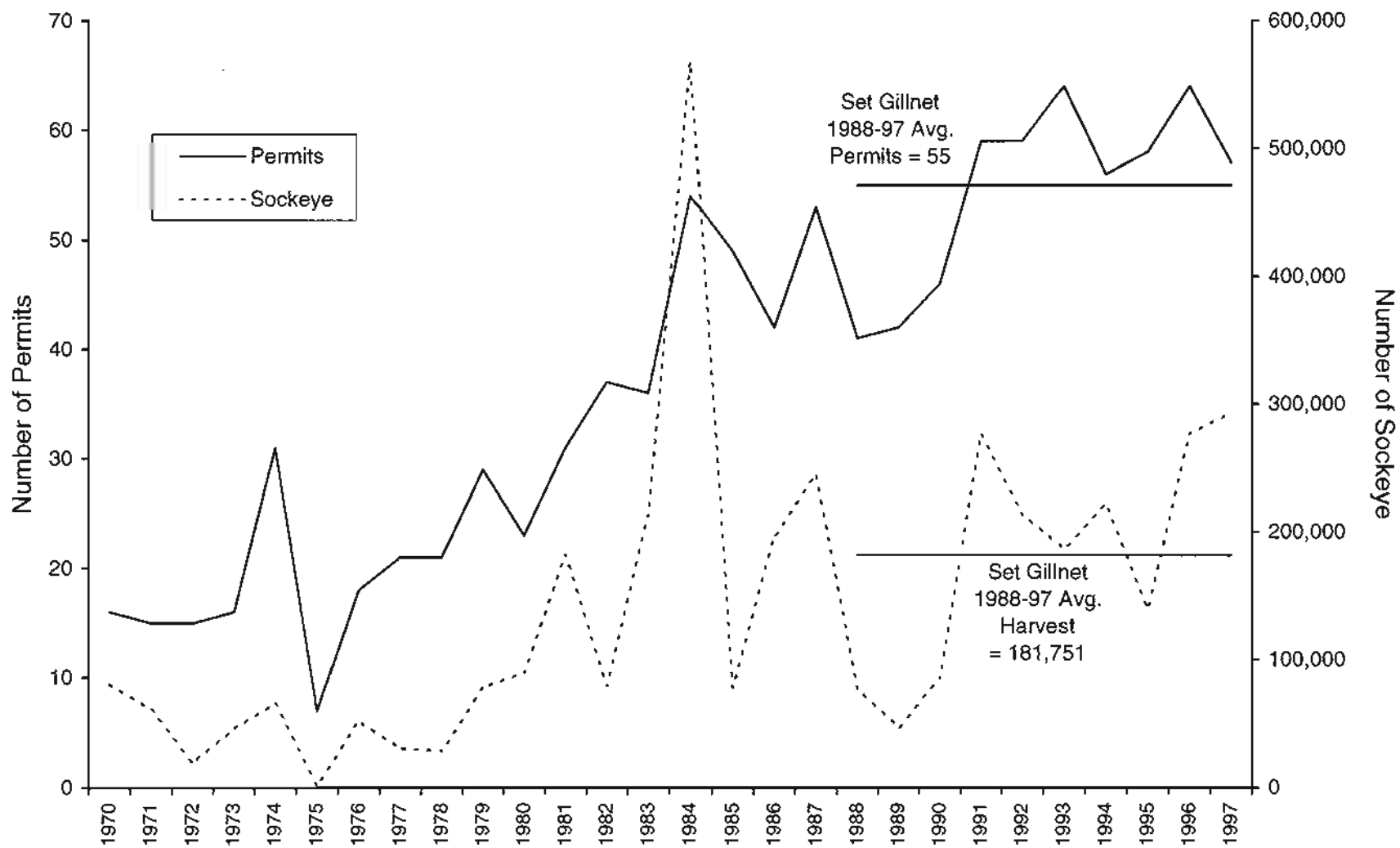


Figure 5. Set gillnet effort and sockeye salmon harvest level in the Southeastern District Mainland fishery, through July 25, 1970-97.

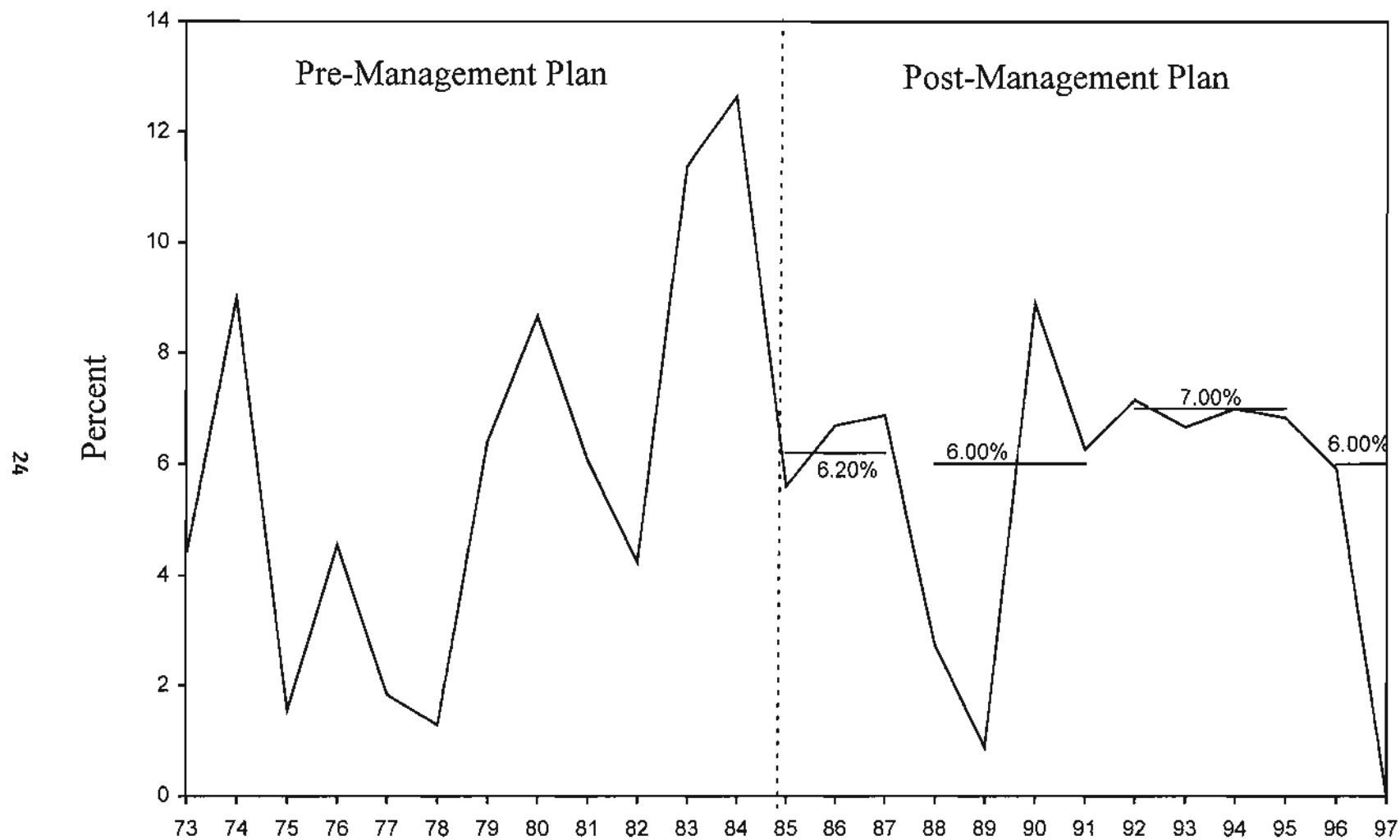


Figure 6. Harvest of Chignik bound sockeye salmon in the Southeastern District Mainland area, through July 25, in percent, 1973-97.

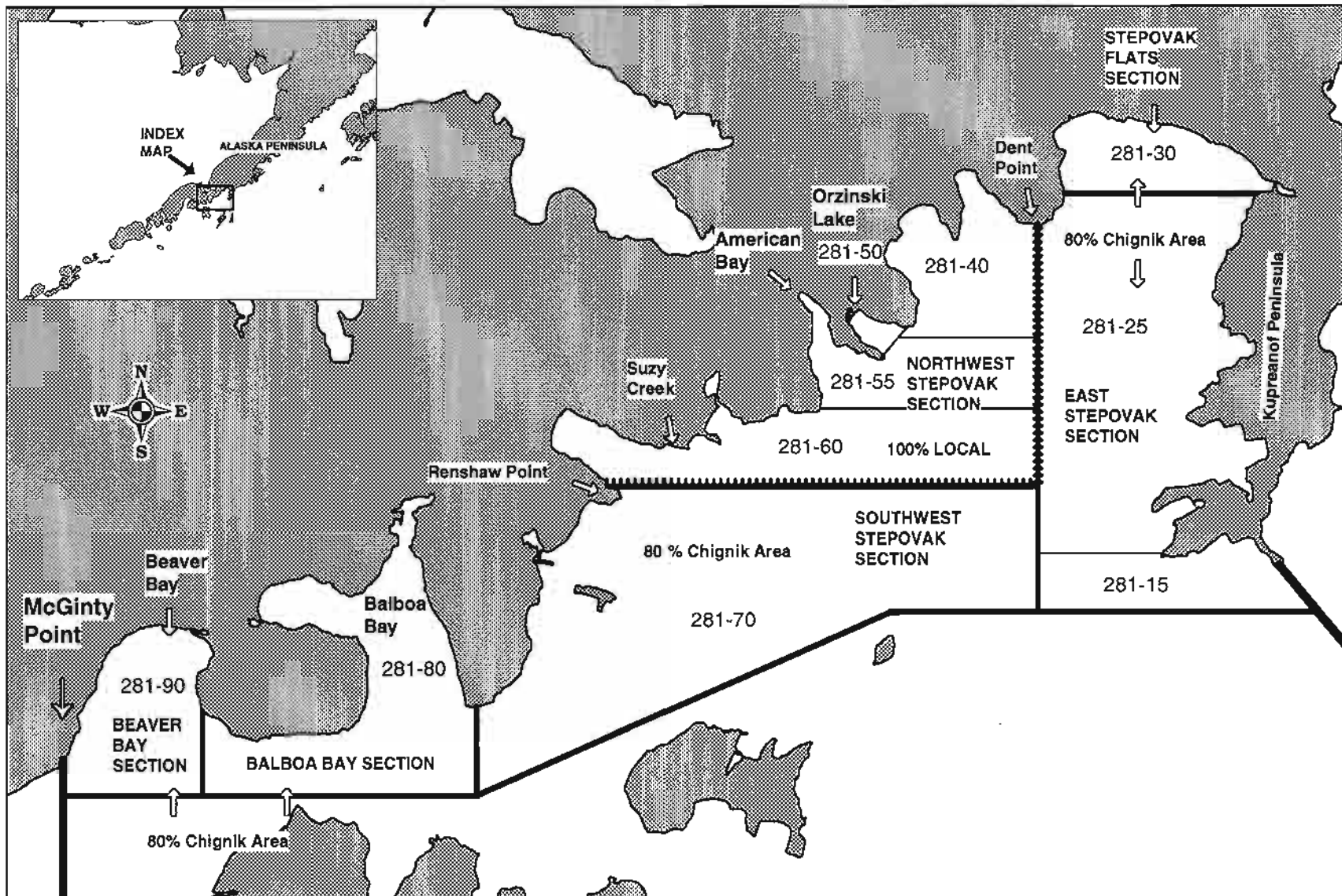


Figure 7. Map of the pre-1992 Southeastern District Mainland fishery from Kupreanof Point to McGinty Point with the salmon sections defined.

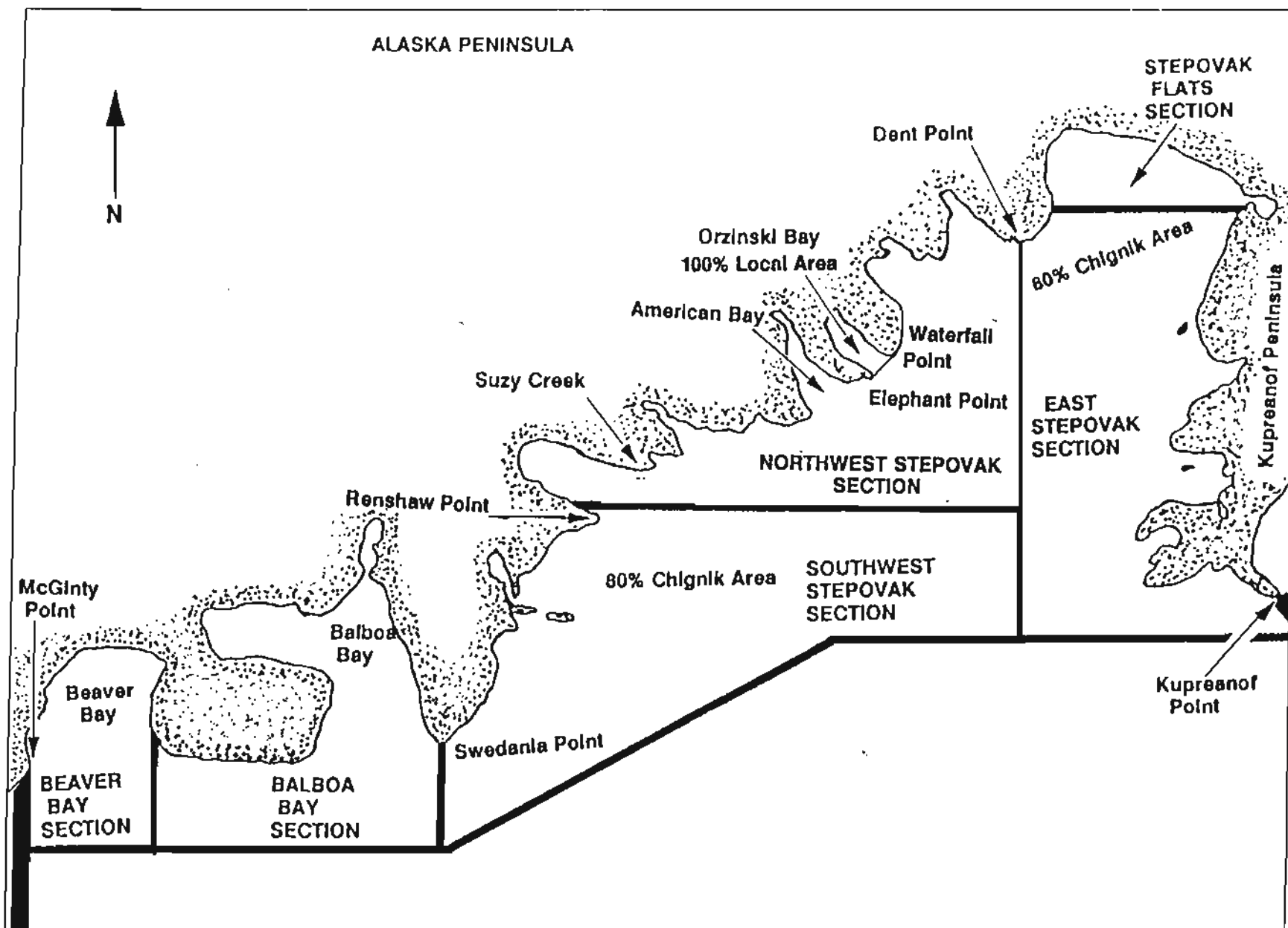


Figure 8 . Map of the Southeastern District Mainland fishery from Kupreanof Point to McGinty Point with the salmon sections defined, 1992-95.



THE REGULATORY REQUIREMENTS OF THIS PLAN ARE DESCRIBED IN THE 1996-97 COMMERCIAL FINFISH REGULATION BOOK. A DIAGRAM OF THE CHRONOLOGICAL REQUIREMENTS OF THIS PLAN IS SHOWN BELOW.

### SOUTHEASTERN DISTRICT MAINLAND

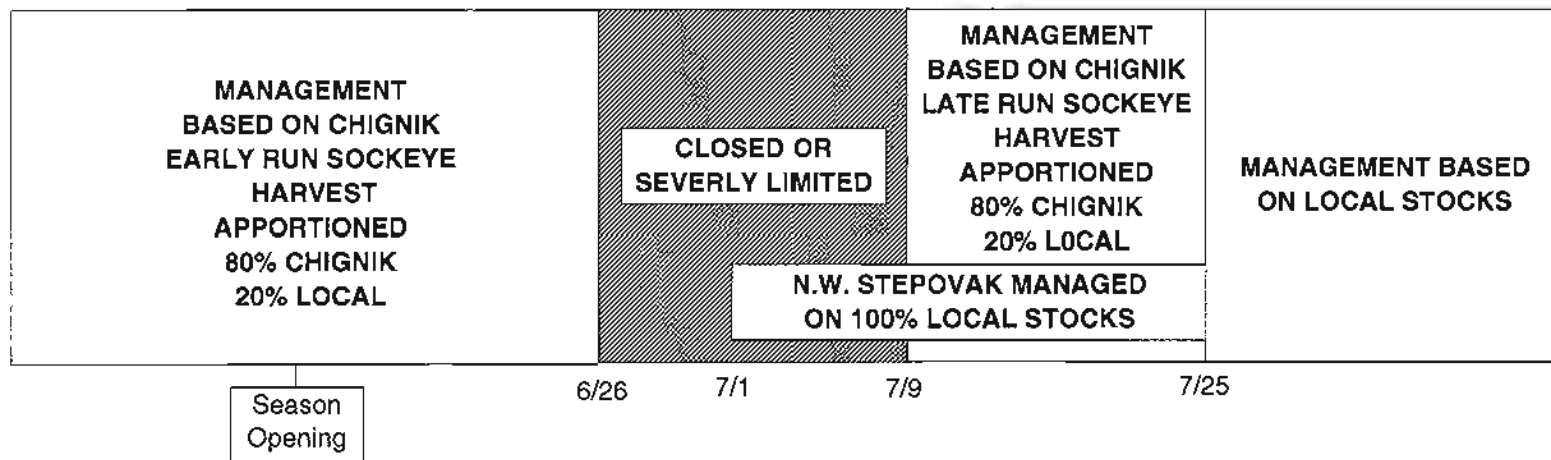


Figure 9. Overview of the Southeastern District Mainland (SEDM) salmon management plan.

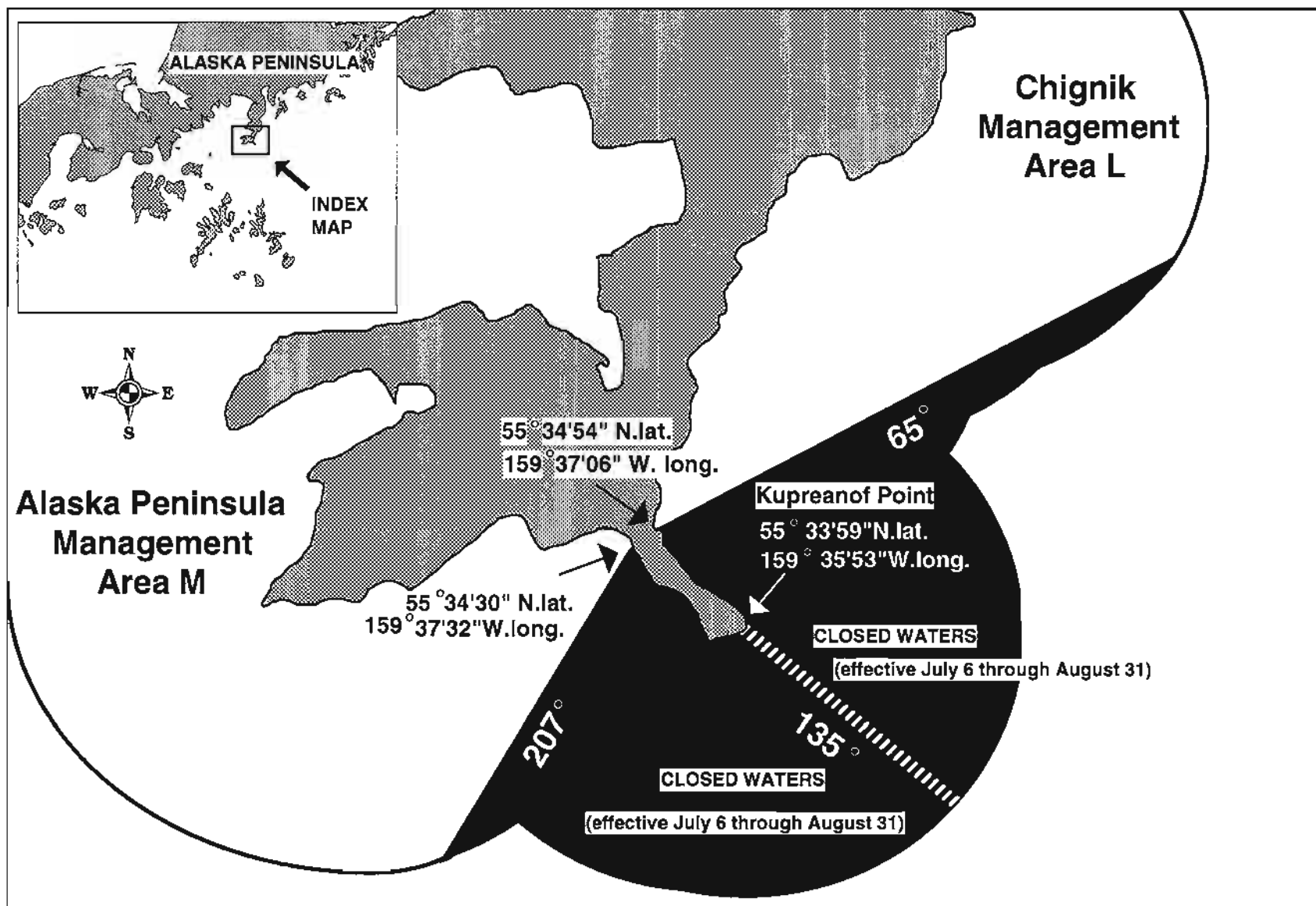


Figure 10. Map of Kupreanof Point area with closed waters defined.

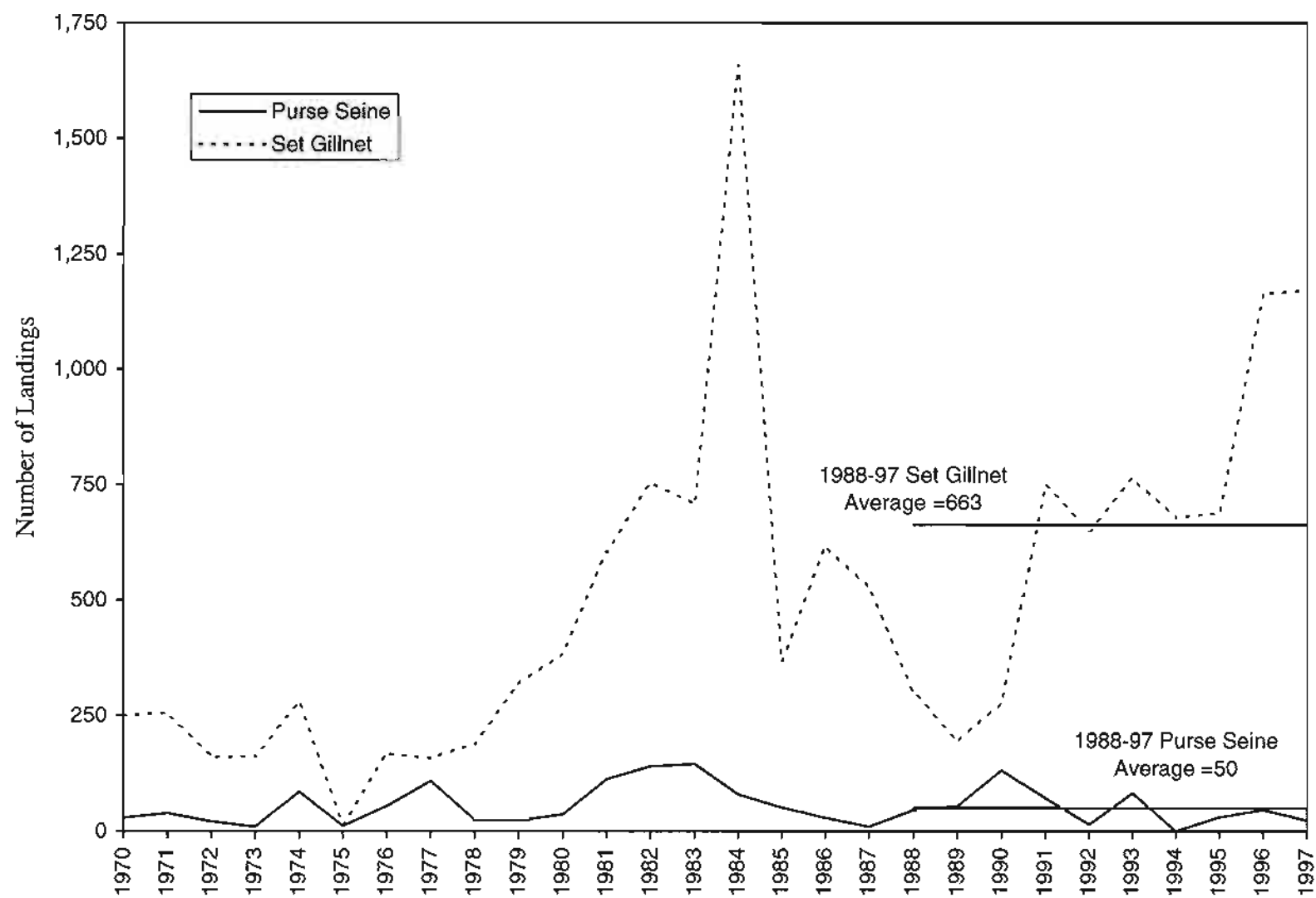


Figure 11. Southeastern District Mainland landings by gear through July 25, 1970-97.

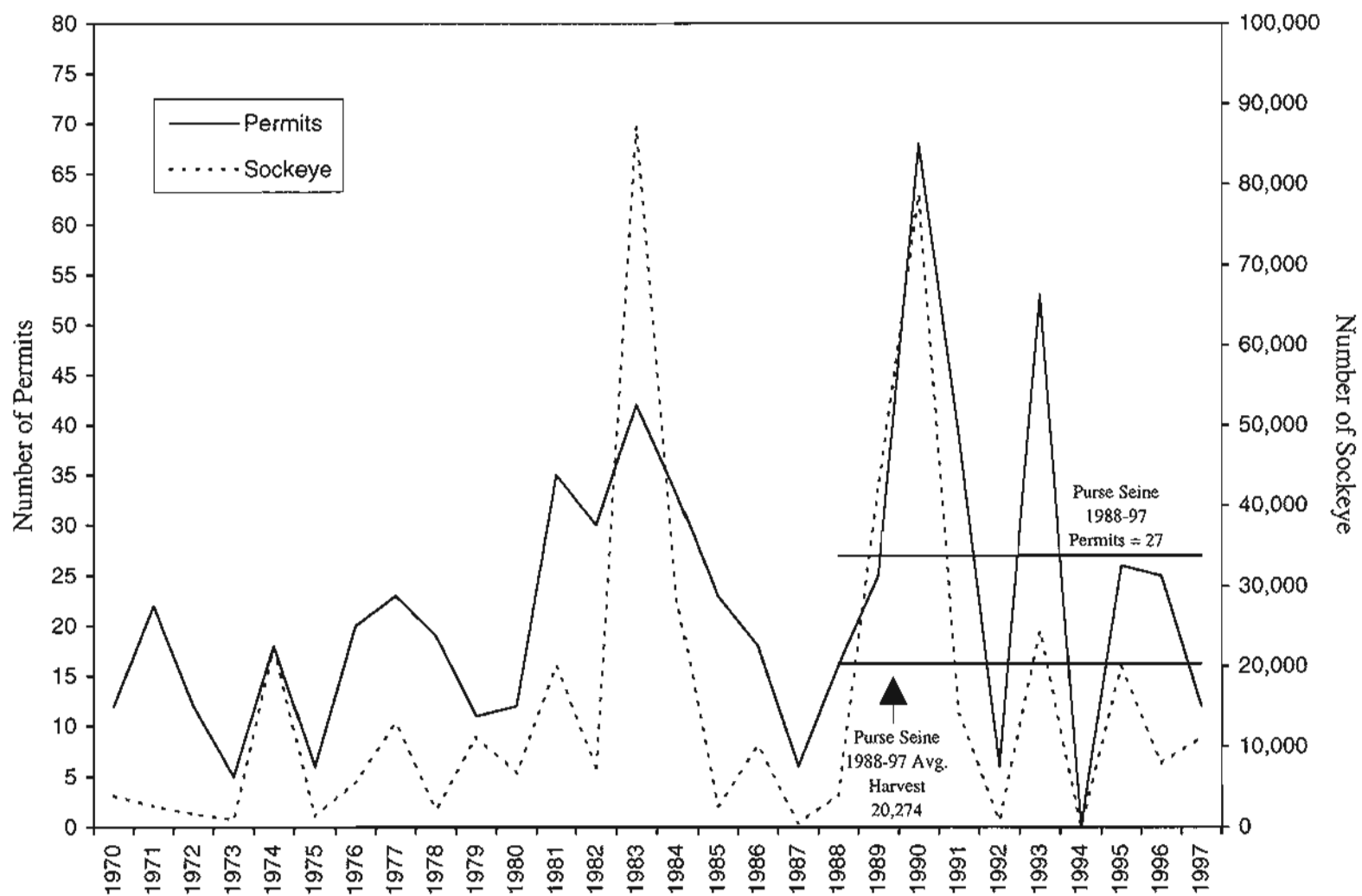


Figure 12. Purse Seine effort and sockeye salmon harvest level in the Southeastern District Mainland fishery, through July 25, 1970-97.

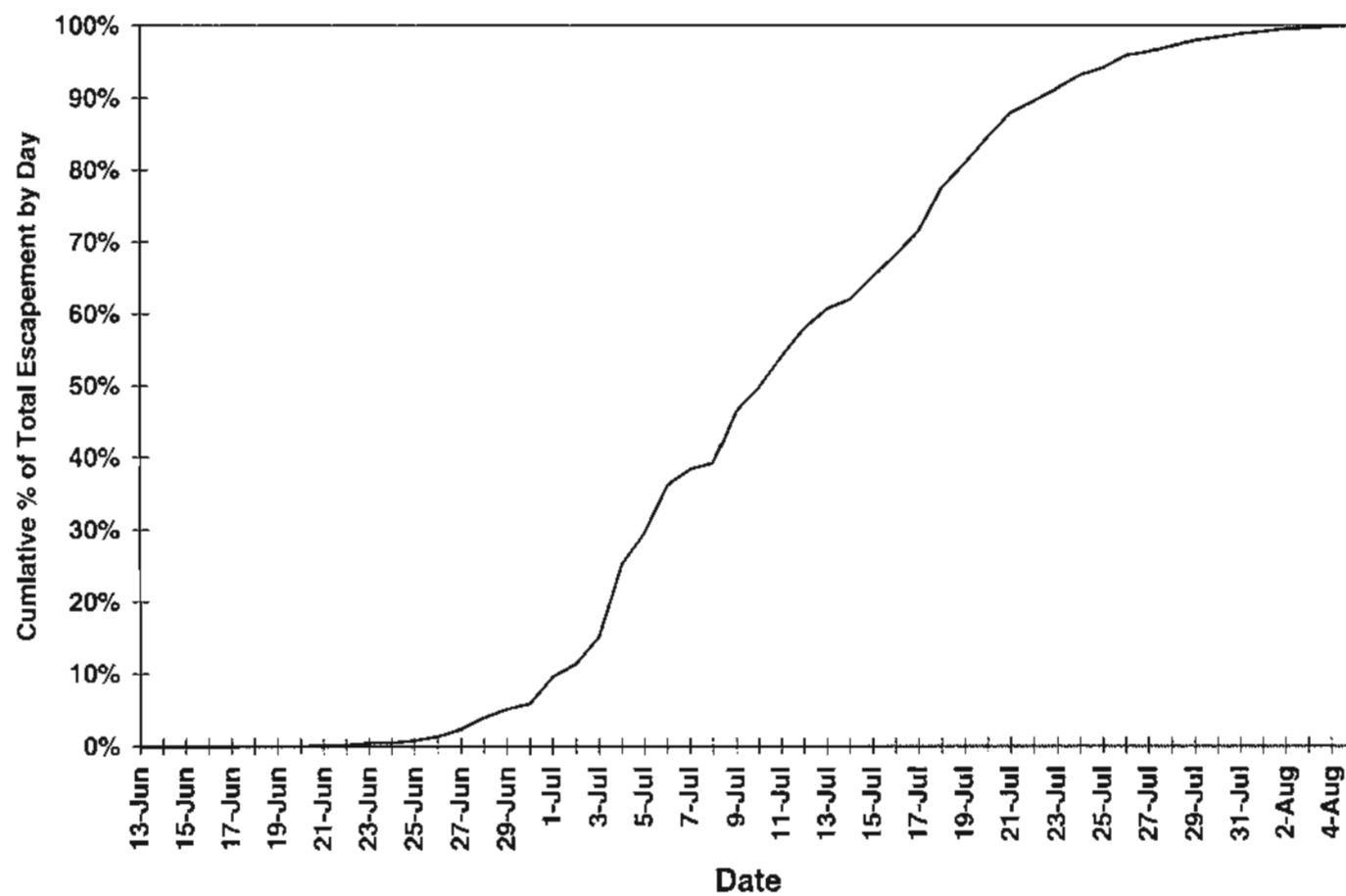


Figure 13. Orzinski Lake weir average cumulative sockeye salmon escapement timing, 1990-97.

## **APPENDIX**

Appendix A. Chignik Management Area preliminary sockeye forecast of the 1998 run.

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**FORECAST AREA: Chignik Management Area**

**SPECIES: Sockeye salmon**

**PRELIMINARY FORECAST OF THE 1998 RUN:**

	Forecast Estimate (thousands)	Forecast Range (thousands)
<b>TOTAL PRODUCTION:</b>		
<u>Early Run (Black Lake)</u>		
Total Run	900	250-1,650
Escapement	400	
Commercial Common Property Harvest	500	
<u>Late Run (Chignik Lake)</u>		
Total Run	1,100	550-2,650
Escapement	250	
Commercial Common Property Harvest	850	
<u>Total Chignik Run</u>		
Total Run	2,000	800-4,300
Escapement	650	
Commercial Common Property Harvest	1,350	

**FORECAST METHODS**

Black Lake

The preseason run forecast to Black Lake was generated with a multiple linear regression model employing numbers and length of the prior year's age-1.2 sockeye (1966-1997) and current year numbers of age-1.3 and -2.3 fish combined ( $r^2=0.73$ ). Cross validation was completed using freshwater age specific smolt to adult survival estimates from 1997 returns applied to 1995 smolt population estimates. The estimates closely mirrored one another, however only one year of smolt survival data was available. All other age class estimates are based on recent 10-year average returns.

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### Chignik Lake

The Chignik Lake forecast is based primarily on 1995 age-2. smolt outmigration numbers coupled with smolt to adult survival based on returns from 1997. Two methods were used and contrasted for estimation of the run; method 1 used the product of age-2. smolt numbers from 1995 divided by 1994 numbers, then multiplied by 1997 adult run numbers; the second approach used the estimate of age-1.3 Black Lake run for 1998 multiplied by the ratio of age-1. to age-2. smolt to adult survival. This assumes most age 1. sockeye are of Black Lake origin while age-2. fish are from Chignik Lake. Accuracy of the 1998 projection is unknown owing to only a single smolt to adult survival data point.

## **DISCUSSION OF THE 1998 FORECAST**

Early Run: The 1998 Black Lake sockeye salmon run is expected to be 0.9 million fish which is approximately 0.4 million fish less than the 1987–97 average run of 1.3 million. Contributing factors for this low projection is the return of 48 thousand age-1.2 sockeye salmon during the 1997 season, the lowest return since 1989 (37 thousand) which anticipated the 1990 run of about 1.0 million. Recently, the 1996 return of 52 thousand age-1.2 sockeye salmon anticipated the return of approximately 0.7 million fish in 1997. Only 12 times from 1966 to the present, and twice since 1989 has the return of age 1.2 sockeye salmon been between 30 thousand and 100 thousand. Only one of the returns within this range has resulted in an above average run. Additionally, the 1995 age 1. smolt outmigration (2.6 million) was weaker than that of 1994 (7.0 million) which resulted in a poor return of age 1.3 fish in 1997. Confidence in this forecast is fair. We remain uncertain as to forecast accuracy owing to the overall poor performance of the 1997 preseason forecasts regionwide.

Late Run: Both methods estimated the 1998 Chignik Lake sockeye salmon run to be 1.1 million fish which is approximately 0.2 million fish less than the 1988–97 average run of 1.3 million sockeye salmon. For the 6-year-olds (age 2.3) which typically dominate the run, the parent year (1992) escapement is 405,922 with a resultant return per spawner value of 4.4. In recent years, when one of the runs dominates it appears to suppress the other. However, neither run is expected to overwhelm the other, but return at below average levels. The methods employed for this forecast remain untested, therefore a fair amount of uncertainty exists.

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Appendix B.1. Southeastern District Mainland salmon harvest by species, all gear combined, June 1 - July 10, 1970-97.

Year	Permits	Landings	Chinook	Sockeye	Coho	Pink	Chum	Total
1970	17	203	21	79,763	26	1,910	3,305	85,025
1971	15	196	77	49,763	4	1,991	4,874	56,709
1972	10	119	22	15,364	12	164	1,314	16,876
1973	15	93	9	35,833	2	399	1,009	37,252
1974	33	206	36	60,534	36	1,311	1,851	63,768
1975	0	0	0	0	0	0	0	0
1976	33	173	56	53,661	0	617	1,058	55,392
1977	34	123	17	30,113	0	5,782	2,717	38,629
1978	23	156	23	25,449	0	418	2,244	28,134
1979	25	194	64	38,267	107	3,994	1,343	43,775
1980	23	216	51	51,365	3	76	2,413	53,908
1981	30	418	1,177	133,501	177	1,438	7,445	143,738
1982	36	480	197	60,386	65	1,028	11,924	73,600
1983	34	377	298	121,625	514	102	2,899	125,438
1984	55	1,468	661	532,151	582	6,965	18,474	558,833
1985	44	261	146	61,160	1	855	3,601	65,763
1986	42	383	153	140,329	70	1,461	12,231	154,244
1987	53	385	89	216,609	4	105	5,382	222,189
1988	21	58	21	17,924	3	67	972	18,987
1989	39	101	44	11,728	5	301	458	12,536
1990	37	94	128	20,177	95	115	2,946	23,461
1991	58	631	386	251,386	388	744	5,040	257,944
1992	59	367	142	134,978	11	296	4,281	139,708
1993	59	540	491	135,950	294	393	1,218	138,346
1994	55	407	220	177,938	672	6,767	5,343	190,940
1995	55	356	254	72,484	64	282	4,846	77,930
1996	62	728	193	194,535	608	7,819	14,438	217,593
1997	51	392	50	84,206	174	1,440	1,042	86,912
Averages <sup>a</sup>								
1978-97	43	401	239	124,107	192	1,733	5,427	131,699
1988-97	50	367	193	110,131	231	1,822	4,058	116,436

<sup>a</sup> Only set gillnet gear is allowed prior to July 11 since the 1978 season. After 1977, any purse seine deliveries prior to July 11 are assumed to be in error and were assigned to gillnet gear.

Appendix B.2. Southeastern District Mainland salmon harvest by species, purse seine gear, June 1 - July 10, 1970-97.

Year	Permits	Landings	Chinook	Sockeye	Coho	Pink	Chum	Total
1970	4	10	1	3,357	0	373	350	4,081
1971	7	12	7	1,240	0	1,539	692	3,478
1972	2	5	0	490	0	0	19	509
1973	2	2	0	703	0	9	0	712
1974	10	43	11	12,610	17	583	1,191	14,412
1975	0	0	0	0	0	0	0	0
1976	14	24	7	3,276	0	203	216	3,702
1977	12	29	10	8,132	0	4,262	805	13,209
1978	0	0	0	0	0	0	0	0
1979	0	0	0	0	0	0	0	0
1980	0	0	0	0	0	0	0	0
1981	0	0	0	0	0	0	0	0
1982	0	0	0	0	0	0	0	0
1983	0	0	0	0	0	0	0	0
1984	0	0	0	0	0	0	0	0
1985	0	0	0	0	0	0	0	0
1986	0	0	0	0	0	0	0	0
1987	0	0	0	0	0	0	0	0
1988	0	0	0	0	0	0	0	0
1989	0	0	0	0	0	0	0	0
1990	0	0	0	0	0	0	0	0
1991	0	0	0	0	0	0	0	0
1992	0	0	0	0	0	0	0	0
1993	0	0	0	0	0	0	0	0
1994	0	0	0	0	0	0	0	0
1995	0	0	0	0	0	0	0	0
1996	0	0	0	0	0	0	0	0
1997	0	0	0	0	0	0	0	0
Averages <sup>a</sup>								
1970-77	6	16	5	3,726	2	871	409	5,013

<sup>a</sup> Only set gillnet gear is allowed prior to July 11 since the 1978 season. After 1977, any purse seine deliveries prior to July 11 are assumed to be in error and were assigned to gillnet gear.

Appendix B.3. Southeastern District Mainland salmon harvest by species, set gillnet gear,  
June 1 - July 10, 1970-97.

Year	Permits	Landings	Chinook	Sockeye	Coho	Pink	Chum	Total
1970	14	191	20	76,251	26	1,536	2,949	80,782
1971	9	184	70	48,523	4	452	4,182	53,231
1972	10	115	22	14,874	12	164	1,295	16,367
1973	14	91	9	35,130	2	390	1,009	36,540
1974	26	163	25	47,924	19	728	660	49,356
1975	0	0	0	0	0	0	0	0
1976	19	149	49	50,385	0	414	842	51,690
1977	22	94	7	21,981	0	1,520	1,912	25,420
1978	23	156	23	25,449	0	418	2,244	28,134
1979	24	191	64	38,200	107	3,988	1,339	43,698
1980	23	216	51	51,365	3	76	2,413	53,908
1981	29	417	1,177	133,371	177	1,438	7,445	143,608
1982	36	480	197	60,386	65	1,028	11,924	73,600
1983	34	377	298	121,625	514	102	2,899	125,438
1984	55	1,468	661	532,151	582	6,965	18,474	558,833
1985	44	261	146	61,160	1	855	3,601	65,763
1986	42	383	153	140,329	70	1,461	12,231	154,244
1987	53	385	89	216,609	4	105	5,382	222,189
1988	21	58	21	17,924	3	67	972	18,987
1989	39	101	44	11,728	5	301	458	12,536
1990	37	94	128	20,177	95	115	2,946	23,461
1991	58	631	386	251,386	388	744	5,040	257,944
1992	59	367	142	134,978	11	296	4,281	139,708
1993	59	540	491	135,950	294	393	1,218	138,346
1994	55	407	220	177,938	672	6,767	5,343	190,940
1995	55	356	254	72,484	64	282	4,846	77,930
1996	62	728	193	194,535	608	7,819	14,438	217,593
1997	51	392	50	84,206	174	1,440	1,042	86,912
Averages <sup>a</sup>								
1978-97	43	400	239	124,098	192	1,733	5,427	131,689
1988-97	50	367	193	110,131	231	1,822	4,058	116,436

<sup>a</sup> Only set gillnet gear is allowed prior to July 11 since the 1978 season. After 1977, any purse seine deliveries prior to July 11 are assumed to be in error and were assigned to gillnet gear.

Appendix B.4. Southeastern District Mainland salmon harvest, by species, all gear combined, June 1-July 25, 1970-97.

Year	Permits	Landings	Chinook	Sockeye	Coho	Pink	Chum	Total
1970	27	288	32	84,603	183	21,836	16,244	122,898
1971	33	294	94	63,366	92	18,741	18,206	100,499
1972	23	180	34	21,105	85	5,762	9,735	36,721
1973	18	171	17	47,579	231	4,503	5,236	57,566
1974	42	363	50	92,562	216	29,769	7,783	130,380
1975	13	25	0	3,156	63	3,020	770	7,009
1976	41	221	58	59,844	37	20,059	6,759	86,757
1977	51	266	33	48,589	940	43,301	11,454	104,317
1978	42	213	39	31,337	354	33,140	16,104	80,974
1979	42	344	119	90,658	5,857	45,582	7,561	149,777
1980	36	420	79	96,665	1,608	40,779	59,441	198,572
1981	69	718	1,320	202,540	3,058	17,347	172,340	396,605
1982	67	893	401	86,793	1,920	209,898	134,473	433,485
1983	78	852	1,387	302,387	3,222	11,295	101,873	420,164
1984	87	1,736	1,054	595,044	4,414	199,990	141,452	941,954
1985	72	418	177	80,957	909	74,592	87,116	243,751
1986	60	645	219	206,532	770	40,771	51,003	299,295
1987	59	537	130	244,895	197	2,363	21,332	268,917
1988	57	345	214	81,160	2,318	97,534	74,743	255,969
1989	67	248	145	89,224	1,226	210,017	6,570	307,182
1990	115	408	694	166,322	16,809	48,999	43,479	276,303
1991	98	818	614	289,727	1,386	24,788	12,113	328,628
1992	65	664	170	215,444	135	15,939	20,629	252,317
1993	117	845	1,093	210,927	4,207	78,278	9,266	303,771
1994	56	678	242	221,657	1,041	11,158	5,651	239,749
1995	84	718	321	159,381	2,286	52,772	21,809	236,569
1996	89	1,210	325	284,076	3,846	71,856	36,478	396,581
1997	69	1,194	146	304,629	1,380	16,613	6,368	329,136
Averages								
1978-97	71	695	444	198,018	2,847	65,186	51,490	317,985
1988-97	82	713	396	202,255	3,463	62,795	23,711	292,621

Appendix B.5. Southeastern District Mainland salmon harvest, by species, purse seine gear, June 1-July 25, 1970-97.

Year	Permits	Landings	Chinook	Sockeye	Coho	Pink	Chum	Total
1970	13	29	10	3,911	27	13,679	3,730	21,357
1971	24	39	20	2,599	36	17,741	9,764	30,160
1972	12	21	6	1,614	4	3,761	4,279	9,664
1973	5	9	7	976	137	2,653	1,298	5,071
1974	18	85	18	22,129	72	21,622	4,108	47,949
1975	6	11	0	1,349	34	2,060	178	3,621
1976	22	54	7	5,724	37	14,912	4,605	25,285
1977	30	108	13	14,646	940	37,510	6,413	59,522
1978	19	24	11	2,267	321	31,355	10,371	44,325
1979	12	23	19	11,159	2,821	34,331	1,676	50,006
1980	12	36	4	6,896	1,011	34,807	30,547	73,265
1981	35	112	117	19,883	2,725	12,984	149,523	185,232
1982	30	140	128	7,351	973	190,694	101,744	300,890
1983	42	145	1,022	87,107	2,192	9,455	87,155	186,931
1984	33	79	346	28,001	2,933	154,448	109,445	295,173
1985	23	51	20	2,610	725	66,517	77,537	147,409
1986	18	29	42	9,987	321	31,231	30,653	72,234
1987	6	9	19	482	95	808	8,388	9,792
1988	16	45	130	3,956	1,587	80,939	63,211	149,823
1989	25	54	58	42,247	1,121	198,917	5,121	247,464
1990	69	131	503	80,954	15,980	47,534	34,415	179,386
1991	39	71	175	13,959	529	18,660	4,380	37,703
1992	6	14	4	806	20	4,810	14,832	20,472
1993	53	82	536	24,271	3,543	63,521	5,850	97,721
1994	0	0	0	0	0	0	0	0
1995	26	30	53	19,866	2,104	39,677	13,625	75,325
1996	25	46	73	7,864	977	19,071	4,619	32,604
1997	12	23	44	11,115	491	4,325	494	16,469
Averages								
1978-97	25	57	165	19,039	2,023	52,204	37,679	111,111
1988-97	27	50	158	20,504	2,635	47,745	14,655	85,697

Appendix B.6. Southeastern District Mainland salmon harvest, by species, set gillnet gear, June 1-July 25, 1970-97.

Year	Permits	Landings	Chinook	Sockeye	Coho	Pink	Chum	Total
1970	16	250	21	80,383	156	5,673	11,967	98,200
1971	15	255	74	60,767	56	1,000	8,442	70,339
1972	15	160	28	19,491	81	2,001	5,456	27,057
1973	16	162	10	46,603	94	1,850	3,938	52,495
1974	32	278	32	70,433	144	8,147	3,675	82,431
1975	7	14	0	1,807	29	960	592	3,388
1976	19	167	51	54,120	0	5,147	2,154	61,472
1977	22	158	20	33,943	0	5,791	5,041	44,795
1978	23	189	28	29,070	33	1,785	5,733	36,649
1979	29	318	100	79,432	3,036	11,245	5,881	99,694
1980	24	384	75	89,769	597	5,972	28,894	125,307
1981	32	604	1,203	182,527	333	4,339	22,121	210,523
1982	37	753	273	79,442	947	19,204	32,729	132,595
1983	36	707	365	215,280	1,030	1,840	14,718	233,233
1984	54	1,657	708	567,043	1,481	45,542	32,007	646,781
1985	49	367	157	78,347	184	8,075	9,579	96,342
1986	42	616	177	196,545	449	9,540	20,350	227,061
1987	53	528	111	244,413	102	1,555	12,944	259,125
1988	41	300	84	77,204	731	16,595	11,532	106,146
1989	42	194	87	46,977	105	11,100	1,449	59,718
1990	46	277	191	85,368	829	1,465	9,064	96,917
1991	59	747	439	275,768	857	6,128	7,733	290,925
1992	59	650	166	214,638	115	11,129	5,797	231,845
1993	64	763	557	186,656	664	14,757	3,416	206,050
1994	56	678	242	221,657	1,041	11,158	5,651	239,749
1995	58	688	268	139,515	182	13,097	8,184	161,246
1996	64	1,164	252	276,212	2,869	52,785	31,859	363,977
1997	57	1,171	102	293,514	889	12,288	5,874	312,667
Averages								
1978-97	46	638	279	178,969	824	12,980	13,776	206,828
1988-97	55	663	239	181,751	828	15,050	9,056	206,924

Appendix B.7. Southeastern District Mainland salmon harvest by species, all gear combined, June 1-October 31, 1970-97.

Year	Permits	Landings	Chinook	Sockeye	Coho	Pink	Chum	Total
1970	46	414	33	85,424	1,313	192,594	50,974	330,338
1971	49	508	133	64,268	311	349,635	145,990	560,337
1972	34	211	54	22,190	227	12,666	24,181	59,318
1973	24	191	18	48,394	426	11,955	10,567	71,360
1974	43	381	50	93,751	216	49,524	17,336	160,877
1975	13	25	0	3,156	63	3,020	770	7,009
1976	65	356	58	61,633	198	287,505	26,628	376,022
1977	60	389	33	53,468	2,002	217,309	25,964	298,776
1978	70	436	42	34,831	6,773	694,778	68,936	805,360
1979	82	710	160	128,238	24,856	1,232,466	81,475	1,467,195
1980	70	746	116	131,205	20,522	415,148	200,954	767,945
1981	92	1,347	1,368	261,193	13,445	1,129,890	417,263	1,823,159
1982	91	1,517	548	118,079	18,578	942,788	388,445	1,468,438
1983	92	1,526	1,656	396,453	18,893	178,703	247,600	843,305
1984	113	2,479	1,189	680,672	29,244	1,424,171	262,225	2,397,501
1985	91	1,109	218	137,891	15,545	1,018,006	167,523	1,339,183
1986	89	1,077	386	245,511	4,943	490,316	168,943	910,099
1987	104	1,102	364	299,463	24,100	378,973	244,356	947,256
1988	104	1,038	349	158,374	40,621	1,180,811	258,832	1,638,987
1989	123	1,270	1,217	282,294	74,321	3,005,086	132,179	3,495,097
1990	133	914	832	279,754	55,593	251,926	156,521	744,626
1991	133	1,700	1,063	396,655	49,873	2,119,216	195,154	2,761,961
1992	119	1,445	631	327,194	55,070	997,098	104,757	1,484,750
1993	127	1,764	1,764	331,015	37,034	2,661,360	65,995	3,097,168
1994	122	1,408	570	330,279	54,872	335,695	123,561	844,977
1995	118	1,718	498	399,475	48,547	2,112,539	186,976	2,748,035
1996	97	1,803	590	361,183	22,019	273,154	82,543	739,489
1997	87	1,603	289	407,311	22,099	83,756	20,234	533,689
Averages								
1978-97	105	1,383	727	298,539	33,167	1,064,795	184,502	1,581,729
1988-97	116	1,466	780	327,353	46,005	1,302,064	132,675	1,808,878

Appendix B.8. Southeastern District Mainland salmon harvest by species, purse seine gear, June 1-October 31, 1970-97.

Year	Permits	Landings	Chinook	Sockeye	Coho	Pink	Chum	Total
1970	35	130	11	4,165	829	178,533	32,197	215,735
1971	42	239	59	3,231	230	345,277	135,567	484,364
1972	24	45	26	2,233	111	9,672	17,744	29,786
1973	13	23	8	1,346	316	9,755	5,753	17,178
1974	20	100	18	23,219	72	41,258	13,522	78,089
1975	6	11	0	1,349	34	2,060	178	3,621
1976	46	173	7	5,737	38	281,865	24,474	312,121
1977	39	181	13	14,873	1,007	210,572	18,084	244,549
1978	45	197	14	4,462	4,470	687,801	59,742	756,489
1979	49	258	56	36,321	17,653	1,184,456	62,110	1,300,596
1980	41	146	33	15,201	5,772	382,151	152,423	555,580
1981	54	414	152	32,827	9,696	1,060,330	358,166	1,461,171
1982	50	350	251	8,212	8,004	868,435	314,809	1,199,711
1983	49	260	1,256	109,489	7,416	151,331	197,038	466,530
1984	56	308	458	63,661	17,611	1,279,664	198,845	1,560,239
1985	42	245	49	18,219	8,864	892,831	134,668	1,054,631
1986	42	150	197	21,178	1,870	430,690	131,155	585,090
1987	49	160	203	9,421	12,461	352,451	204,662	579,198
1988	55	254	234	32,865	29,911	1,091,389	220,925	1,375,324
1989	75	438	1,077	130,549	64,247	2,824,089	95,146	3,115,108
1990	75	231	621	121,689	47,415	241,192	134,931	545,848
1991	70	348	551	60,417	36,910	1,945,583	126,403	2,169,864
1992	59	178	397	43,267	35,799	855,400	75,142	1,010,005
1993	62	363	1,055	59,265	25,021	2,484,375	38,703	2,608,419
1994	61	106	168	24,832	29,544	256,712	80,358	391,614
1995	56	254	194	83,721	29,220	1,846,913	123,058	2,083,106
1996	29	92	309	23,873	4,558	135,274	27,735	191,749
1997	28	55	167	27,928	5,604	61,465	6,086	101,250
Averages								
1978-97	52	240	372	46,370	20,102	951,627	137,105	1,155,576
1988-97	57	232	477	60,841	30,823	1,174,239	92,849	1,359,229



Appendix B.9. Southeastern District Mainland salmon harvest by species, set gillnet gear, June 1 - October 31, 1970-97.

Year	Permits	Landings	Chinook	Sockeye	Coho	Pink	Chum	Total
1970	17	273	21	80,947	483	10,875	17,979	110,305
1971	15	269	74	61,037	81	4,358	10,423	75,973
1972	15	167	28	19,957	116	2,994	6,437	29,532
1973	16	168	10	47,048	110	2,200	4,814	54,182
1974	32	281	32	70,532	144	8,266	3,814	82,788
1975	7	14	0	1,807	29	960	592	3,388
1976	20	183	51	55,896	160	5,640	2,154	63,901
1977	22	208	20	38,595	995	6,737	7,880	54,227
1978	25	239	28	30,369	2,303	6,977	9,194	48,871
1979	33	448	104	91,850	7,203	45,204	19,361	163,722
1980	31	600	83	116,004	14,750	32,997	48,531	212,365
1981	36	931	1,216	228,236	3,749	69,536	58,401	361,138
1982	41	1,167	297	109,867	10,574	74,353	73,636	268,727
1983	43	1,266	400	286,964	11,477	27,372	50,562	376,775
1984	57	2,171	731	617,011	11,633	144,507	63,380	837,262
1985	49	864	169	119,672	6,681	125,175	32,855	284,552
1986	47	927	189	224,333	3,073	59,626	37,788	325,009
1987	55	942	161	290,042	11,639	26,522	39,694	368,058
1988	49	784	115	125,509	10,710	89,422	37,907	263,663
1989	48	832	140	151,745	10,074	180,997	37,033	379,989
1990	58	683	211	158,065	8,178	10,734	21,590	198,778
1991	63	1,352	512	336,238	12,963	173,633	68,751	592,097
1992	60	1,267	234	283,927	19,271	141,698	29,615	474,745
1993	65	1,401	709	271,750	12,013	176,985	27,292	488,749
1994	61	1,302	402	305,447	25,328	78,983	43,203	453,363
1995	62	1,464	304	315,754	19,327	265,626	63,918	664,929
1996	68	1,711	281	337,310	17,461	137,880	54,808	547,740
1997	59	1,548	122	379,383	16,495	22,291	14,148	432,439
Averages								
1978-97	51	1,095	320	238,974	11,745	94,526	41,583	387,149
1988-97	59	1,234	303	266,513	15,182	127,825	39,827	449,649

Appendix B.10. Southeastern District Mainland salmon harvest by species, set gillnet gear, June 1-October 31, 1997.

	Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
				Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
44	7/6	44	70	19	225	12,470	77,955	24	185	182	558	127	918
	7/7	47	81	10	107	15,728	99,823	40	288	467	1,430	241	1,729
	7/8	47	83	9	99	18,366	117,779	37	264	220	680	169	1,222
	7/9	48	85	7	75	19,089	129,588	38	264	352	1,096	238	1,727
	7/10	47	73	5	71	18,553	115,189	35	264	219	675	267	1,849
	7/11	45	63	7	89	13,724	92,104	13	101	212	871	170	1,209
	7/12	41	61	8	75	8,308	54,758	12	102	194	604	181	1,341
	7/14	38	54	5	108	15,058	102,972	19	142	433	1,678	244	1,947
	7/15	44	66	5	60	23,794	153,071	27	208	326	1,102	273	1,972
	7/16	44	77	9	104	41,737	261,081	44	306	365	1,113	412	2,845
	7/17	45	71	2	13	20,636	130,733	9	61	360	1,282	253	1,873
	7/20	26	50	2	18	10,729	70,684	34	231	631	1,993	238	1,787
	7/21	29	62	7	130	23,524	147,785	86	544	1,789	5,574	464	3,162
	7/22	42	88	2	23	13,309	85,783	26	196	1,154	3,470	353	2,473
	7/23	45	74	5	75	14,711	93,312	91	681	1,215	4,381	442	3,145
	7/24	44	80	0	0	13,895	90,223	215	1,658	2,274	6,917	995	7,257
	7/25	26	33	0	0	9,883	64,643	139	989	1,895	6,525	807	5,590
	7/26	41	81	5	52	25,495	161,687	1,829	13,669	8,390	28,859	2,732	19,627
	8/15	9	10	0	0	440	2,530	98	711	409	1,233	478	3,895
	8/16	8	14	0	0	705	4,037	100	708	423	1,294	521	3,685
	9/1	13	15	1	10	1,265	8,165	629	5,124	100	300	467	3,274
	9/2	21	37	1	10	4,346	27,717	2,220	18,497	179	610	1,143	7,776
	9/3	23	41	4	66	5,106	31,339	2,391	19,844	292	757	828	5,851
	9/4	21	32	2	35	3,957	25,262	1,471	11,714	104	298	527	3,703
	9/5	22	38	0	0	4,487	28,139	1,381	10,807	81	266	475	3,313
	9/8	15	23	0	0	2,071	13,767	1,252	10,156	5	15	401	2,915
	9/9	17	18	0	0	1,142	7,575	773	6,517	9	29	356	2,436
	9/10	14	15	0	0	591	3,660	602	4,619	6	18	194	1,370

-Continued-

## Appendix B.10. (2 of 2)

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Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
			Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
9/11	13	15	0	0	925	5,783	518	4,129	4	13	70	468
9/12	13	17	6	55	1,340	8,295	768	6,117	1	3	48	335
9/15	9	9	0	0	1,739	11,201	927	7,184	0	0	10	70
9/16	5	5	1	7	350	2,214	260	2,029	0	0	2	14
9/17	1	1	0	0	47	292	25	236	0	0	0	0
9/18	4	4	0	0	1,334	7,650	189	1,509	0	0	22	130
9/19	2	2	0	0	738	4,066	173	1,268	0	0	0	0
9/22	2	2	0	0	128	772	16	131	0	0	0	0
9/23	4	4	0	0	1,922	11,972	292	2,474	0	0	0	0
9/24	1	1	0	0	146	844	34	282	0	0	0	0
9/25	2	2	0	0	726	4,324	60	508	0	0	0	0
9/26	7	7	0	0	5,615	32,932	242	1,992	0	0	2	12
9/29	6	6	0	0	5,934	35,267	358	2,816	0	0	0	0
9/30	3	3	0	0	570	3,378	27	230	0	0	0	0
10/1	3	4	0	0	160	919	18	144	0	0	0	0
10/2	9	9	0	0	4,656	26,041	244	1,895	0	0	0	0
10/3	5	5	0	0	741	4,333	44	340	0	0	0	0
10/6	6	6	0	0	3,419	19,463	106	868	0	0	0	0
10/7	1	1	0	0	172	947	0	0	0	0	0	0
10/8	2	2	0	0	236	1,446	7	42	0	0	0	0
10/9	7	7	2	14	2,324	13,288	26	182	0	0	0	0
10/10	4	4	0	0	1,836	10,565	71	569	0	0	0	0
10/13	3	3	0	0	1,126	6,943	2	17	0	0	0	0
10/17	1	2	0	0	80	449	0	0	0	0	0	0
Total	59	1,616	124	1,521	379,383	2,414,745	18,042	143,812	22,291	73,644	14,150	100,920
Average weight				12.3		6.4		8.0		3.3		7.1

Appendix B.11. Southeastern District Mainland salmon harvest by species, purse seine gear, June 1-October 31, 1997.

Date	Permits	Landings	Chinook		Sockeye		Coho		Pink		Chum	
			Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
11-Jul	7	7	0	0	654	4,315	2	16	54	185	13	100
14-Jul	1	1	0	0	111	780	4	32	14	58	8	66
15-Jul	1	1	2	19	800	5,357	0	0	59	205	5	38
16-Jul	1	1	0	0	3,497	21,012	0	0	60	180	32	192
17-Jul	2	2	1	8	1,029	6,827	1	7	95	369	30	229
21-Jul	2	2	20	220	793	5,408	435	2,677	1,182	3,547	242	1,706
22-Jul	4	4	15	129	2,222	14,434	9	58	1,566	4,732	80	509
23-Jul	5	5	6	40	2,009	13,132	40	258	1,295	4,813	84	625
26-Jul	20	20	117	1,052	13,718	83,071	3,083	21,367	33,866	117,082	3,241	22,724
15-Aug	4	4	0	0	375	2,114	326	2,341	16,102	48,516	813	6,069
16-Aug	4	4	0	0	428	2,352	356	2,635	5,811	18,007	1,319	8,314
2-Sep	1	1	6	60	70	490	382	3,446	0	0	57	400
4-Sep	1	1	0	0	372	2,232	439	3,253	97	319	20	143
5-Sep	1	1	0	0	1,588	9,525	461	3,343	1,264	3,638	122	834
10-Sep	1	1	0	0	262	1,325	66	583	0	0	20	136
Total	28	55	167	1,528	27,928	172,374	5,604	40,016	61,465	201,651	6,086	42,085
Average weight				9.1		6.2		7.1		3.3		6.9

Appendix B.12. Orzinski and American Bays daily salmon harvest, by species and set gillnet gear, June 1 - July 25, 1990.

Date	Permits	Landings	Chinook	Sockeye	Coho	Pink	Chum
7/9	a	a	a	a	a	a	a
7/10	a	a	a	a	a	a	a
Total	2	3	2	525	0	7	88
Grand Total	2	3	2	525	0	7	88

<sup>a</sup>Confidentiality requirements prohibit releasing this information.

Appendix B.13. Orzinski Bay salmon harvest by species, all gear combined,  
June 1-July 25, 1991.

Date	Permits	Landings	Chinook	Sockeye	Coho	Pink	Chum
6/13	a	a	a	a	a	a	a
6/15	a	a	a	a	a	a	a
6/20	a	a	a	a	a	a	a
6/21	a	a	a	a	a	a	a
6/25	a	a	a	a	a	a	a
7/6	4	7	2	5,370	4	5	28
7/8	6	6	1	2,075	0	12	36
7/9	6	6	2	2,822	5	5	8
7/10	5	7	0	3,832	1	0	6
7/14	7	7	2	1,184	10	31	10
7/15	10	17	2	3,939	85	261	105
7/16	7	10	0	2,662	6	254	90
7/21	7	11	5	6,467	67	920	263
7/22	7	9	9	3,769	65	1,510	388
7/23	10	17	4	3,979	106	2,084	538
Total	18	115	29	42,456	349	5,083	1,516

<sup>a</sup> Confidentiality requirements prohibit releasing this information.

Appendix B.14. Orzinski Bay salmon harvest by species, all gear combined,  
June 1-July 25, 1992.

Date	Permits	Landings	Chinook	Sockeye	Coho	Pink	Chum
6/29	a	a	a	a	a	a	a
7/6	12	19	0	4,897	0	11	58
7/7	11	31	2	6,325	0	62	52
7/8	13	21	0	4,031	0	26	24
7/9	15	20	5	5,185	0	64	48
7/10	16	22	2	4,208	0	45	31
7/11	14	22	3	5,467	1	117	43
7/12	14	24	3	4,911	1	126	48
7/13	11	17	0	4,784	3	132	54
7/14	11	11	0	5,277	3	150	74
7/15	13	20	1	7,288	9	272	87
7/16	15	20	2	5,064	0	298	41
7/17	15	24	0	6,468	0	235	33
7/18	14	19	2	4,627	2	334	11
7/19	14	19	2	6,440	11	755	51
7/20	14	23	0	6,848	3	1,066	125
7/21	14	18	1	4,090	1	1,013	47
7/22	16	22	1	2,991	0	1,209	74
7/23	8	9	0	2,044	1	898	42
7/24	8	9	0	2,880	0	1,060	27
7/25	9	13	1	3,684	0	1,879	141
Total	21	385	25	98,138	35	9,752	1,111

<sup>a</sup> Confidentiality requirements prohibit releasing this information.

Appendix B.15. Orzinski Bay salmon harvest by species, all gear combined,  
June 1-July 25, 1993.

Date	Permits	Landings	Chinook	Sockeye	Coho	Pink	Chum
7/3	26	27	2	3,821	2	2	5
7/4	28	35	2	4,176	0	2	9
7/5	25	37	1	5,762	1	10	10
7/6	22	32	2	6,896	0	0	0
7/7	17	17	0	4,138	0	0	0
7/8	17	23	0	4,372	0	4	1
7/9	12	16	3	2,435	1	7	14
7/10	20	33	2	5,498	0	0	1
7/11	13	17	0	2,665	0	3	2
7/12	15	17	0	2,748	0	2	2
7/14	4	4	0	1,100	0	36	23
7/15	16	18	4	2,215	0	59	13
7/16	13	13	0	1,885	1	35	6
7/21	a	a	a	a	a	a	a
7/22	a	a	a	a	a	a	a
7/23	11	12	1	1,763	32	956	48
7/24	a	a	a	a	a	a	a
Total	33	306	17	50,257	37	1,400	143

<sup>a</sup> Confidentiality requirements prohibit releasing this information.



Appendix B.16. Orzinski Bay salmon harvest by species, all gear combined,  
June 1-July 25, 1994.

Date	Permits	Landings	Chinook	Sockeye	Coho	Pink	Chum
7/11	11	12	1	1,685	7	45	13
7/12	18	34	2	5,304	1	87	16
7/13	19	27	2	5,012	0	151	8
7/14	18	34	1	5,249	5	74	10
7/15	11	12	0	1,289	6	37	2
7/16	17	33	0	7,304	8	330	31
7/17	17	28	0	3,909	1	403	14
7/18	8	13	0	1,243	1	104	5
7/19	9	16	0	1,969	2	204	6
7/20	7	11	3	2,951	10	287	11
7/21	7	14	4	2,161	31	419	21
7/22	5	8	1	1,500	44	457	33
7/23	6	13	4	2,126	83	693	55
7/24	5	7	4	1,109	80	677	50
7/25	5	9	0	908	90	423	33
Total	22	271	22	43,719	369	4,391	308

Appendix B.17. Orzinski Bay salmon harvest by species, all gear combined,  
June 1 - July 25, 1995.

Date	Permits	Landings	Chinook	Sockeye	Coho	Pink	Chum
7/8	12	12	2	2,064	1	28	68
7/9	22	30	0	4,067	0	29	108
7/11	24	25	0	4,207	0	36	19
7/12	25	27	1	2,811	0	46	19
7/13	16	22	0	2,114	1	27	15
7/14	15	22	0	3,845	2	48	22
7/15	14	29	0	3,488	0	58	35
7/16	16	24	1	3,190	0	67	30
7/17	14	20	0	3,439	0	96	31
7/18	13	23	1	5,665	0	235	110
7/19	8	14	0	3,411	0	339	93
7/20	6	11	0	1,551	0	390	70
7/21	5	11	0	1,855	0	458	97
7/22	7	9	0	2,647	0	1,106	235
7/23	9	10	0	1,447	0	313	70
7/24	9	10	0	1,580	0	321	57
7/25	8	10	0	1,623	1	416	48
Total	30	309	5	49,004	5	4,013	1,127

Appendix B.18. Orzinski Bay salmon harvest by species, all gear combined,  
June 1- July 25, 1996.

Date	Permits	Landings	Chinook	Sockeye	Coho	Pink	Chum
6/11	2	2	0	124	0	0	0
6/12	1	1	1	144	0	0	0
6/13	2	2	0	240	0	0	1
6/18	4	6	0	396	0	0	9
6/19	1	1	0	85	0	0	0
6/20	7	9	14	2,479	0	0	81
6/21	1	1	0	425	0	0	7
7/3	15	15	5	2,329	10	12	153
7/4	13	14	1	2,089	8	27	121
7/5	12	12	0	2,019	5	47	126
7/6	10	10	1	865	1	16	62
7/7	8	8	0	667	0	12	27
7/8	6	6	0	386	1	6	4
7/9	6	6	0	1,981	1	122	77
7/10	9	9	1	1,786	18	304	300
7/12	11	12	1	1,401	0	432	204
7/14	14	14	2	1,207	5	367	539
7/15	13	15	1	1,876	0	579	403
7/17	9	10	0	1,674	8	720	289
7/18	6	6	0	871	0	470	320
7/22	4	4	1	584	0	339	81
7/23	6	7	1	1,308	1	1,100	299
7/24	6	6	0	1,292	2	1,528	328
7/25	6	6	0	687	9	1,310	287
Total	33	182	29	26,915	69	7,391	3,718

Appendix B.19. Orzinski Bay salmon harvest by species, all gear combined,  
June 1- June 1 - July 25, 1997.

Date	Permits	Landings	Chinook	Sockeye	Coho	Pink	Chum
7/6	8	9	0	1,709	0	6	6
7/7	15	23	4	3,656	2	55	29
7/8	9	11	0	2,151	1	2	0
7/9	14	23	1	4,610	4	87	44
7/10	9	9	0	1,332	1	3	9
7/11	14	16	1	1,528	6	15	25
7/12	12	12	0	1,095	1	18	8
7/14	5	5	0	1,501	1	60	33
7/15	5	11	0	3,733	2	39	18
7/16	9	14	1	6,647	0	49	79
7/17	14	16	0	4,090	4	96	77
7/20	5	7	1	2,145	0	73	51
7/21	5	7	0	1,782	0	88	33
7/22	10	15	0	1,667	3	151	70
7/23	11	13	2	1,992	12	221	81
7/24	4	6	0	897	0	148	43
7/25	5	5	0	1,651	8	332	91
Total	31	202	10	42,186	45	1,443	697

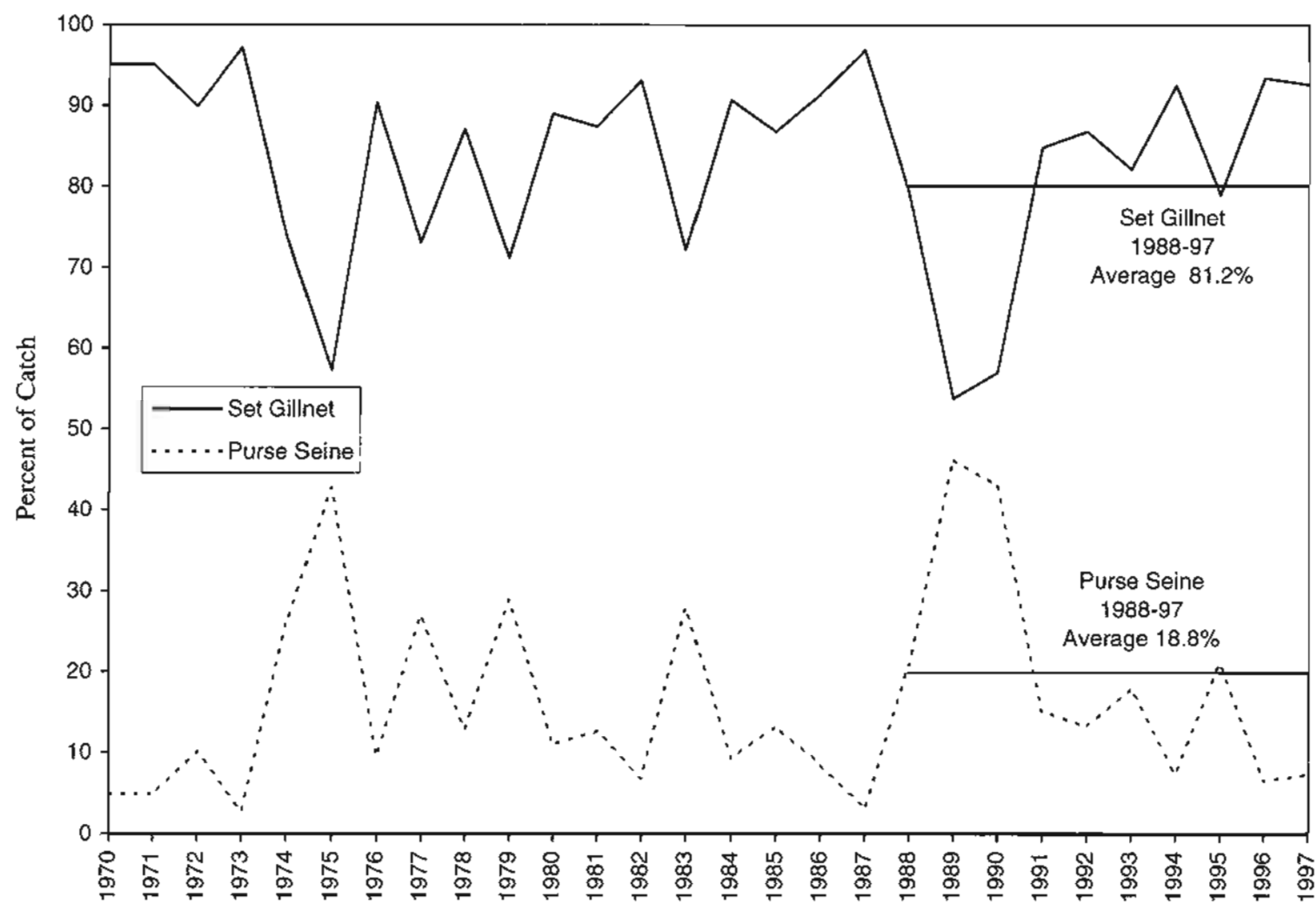
Appendix B.20. Southeastern District Mainland fishery, annual CFEC permits and number of landings by gear type, 1970-97.

Year	Purse Seine		Set Gillnet		Total	
	Permits	Landings	Permits	Landings	Permits	Landings
1970	35	127	17	273	52	400
1971	41	216	15	269	56	485
1972	24	43	15	167	39	210
1973	13	22	16	167	29	189
1974	20	100	31	262	51	362
1975	6	11	7	14	13	25
1976	44	167	19	174	63	341
1977	34	136	21	190	55	326
1978	45	196	23	235	68	431
1979	49	247	33	437	82	684
1980	40	143	31	598	71	741
1981	50	365	35	923	85	1,288
1982	48	343	41	1,167	89	1,510
1983	49	260	43	1,259	92	1,519
1984	55	292	57	2,171	112	2,463
1985	42	245	49	864	91	1,109
1986	42	150	47	927	89	1,077
1987	49	160	55	942	104	1,102
1988	55	254	49	784	104	1,038
1989	75	428	48	832	123	1,260
1990	74	228	58	683	132	911
1991	70	348	63	1,352	133	1,700
1992	59	178	60	1,267	119	1,445
1993	62	363	65	1,401	127	1,764
1994	61	106	61	1,302	122	1,408
1995	56	254	62	1,464	118	1,718
1996	29	92	68	1,711	97	1,803
1997	28	55	59	1,616	87	1,671
Averages						
1978-97	52	235	50	1,097	102	1,332
1988-97	57	231	59	1,241	116	1,472

Appendix B.21. Southeastern District salmon tagging study, 1961.

Tag Recoveries	No.	Location	Time Out	% of Recoveries
<b>Eastern Stepovak Bay:</b>				
<b>Tag releases June 17-25: 130 sockeye, 42 chums, 18 pinks</b>				
Sockeye	1	Local	5 days	10.50%
	1	Local	10 days	
	1	San Diego Bay	3 days	5.30%
	5	Chignik	5 days	73.60%
	1	Chignik	6 days	
	1	Chignik	12 days	
	1	Chignik (spwn grds)	62 days	
	6	Chignik	7/2-6 <sup>a</sup>	5.30%
	1	Karluk (spwn grds)	42 days	
	1	Cook Inlet	33 days	
Pinks	1	Local	4 days	8 days
	1	Deadman Bay (Kodiak)	8 days	
Chums	1	Local	9 days	17 days
	1	Hook Bay (Chignik)	9 days	
	1	Ivanof Bay	17 days	
Total Recoveries	24			

<sup>a</sup> Possibly includes FRI tags.



Appendix B.22. Southeastern District Mainland sockeye salmon catch in percent by gear type, through October 31, 1970-97.

Appendix C. Southeastern District Mainland fishery regulatory history, 1970-97.

Year	Management Plan
Pre-1974	Set weekly fishing periods, usually 5 days per week
1974-77	Day for day fishing with Chignik
1978	3 days per week, seine gear prohibited before July 10
1979-84	5 days per week, 60,000 catch ceiling (until Chignik catches 1 million) After 7/10 entire SEDM managed on local stocks.
1985-91	Assures minimum harvest in Chignik of 600,000, restricts fishing in SEDM during overlap period (6/26-7/9), allows 6% (6.2%-1985-87) allocation of total Chignik sockeye harvest through 7/25, permits openings in Stepovak Flats and Northwest Stepovak Sections based on local runs
1992-95	Area managed on local sockeye runs reduced to include only Orzinski Bay (Stepovak Flats Section not effected), increased allocation of Chignik sockeye harvest from 6% to 7%
1996-97	Area managed on local sockeye runs increased to include the Northwest Stepovak Section beginning July 1, reduced allocation of Chignik sockeye harvest from 7% to 6%



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